

Exploring the Associations of Cultural Intelligence with Culturally Responsive Teaching Self Efficacy, Relevant Experiences, and Job Satisfaction in a sample of White American Teachers

Copyright 2019

Monica L. Reintjes

Submitted to the graduate degree program in Educational Psychology and Research and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Philosophy of Science.

Date Defended: January 24, 2019

# CULTURAL INTELLIGENCE IN WHITE AMERICAN TEACHERS

## Abstract

The idea of being “culturally intelligent” has become an established concept in the corporate world and now, more recently, moved into the realm of education. The most relevant questions for educators remain: How do some White educators become more culturally intelligent than others? Does cultural intelligence relate to effective teaching practices? The purpose of the study was to examine whether job satisfaction, culturally responsive teaching self-efficacy, and relevant experiences (e.g., having studied abroad) related to cultural intelligence (CQ) in White teachers. Data was collected from practicing K-12 teachers in the U.S. who identified as White and non-Hispanic ( $N = 130$ ). Results showed that all four aspects of CQ (i.e., behavioral, cognitive, metacognitive, and motivational) were positively correlated with culturally responsive teaching self-efficacy and relevant experiences. Three of the four CQ subscales (i.e., behavioral, metacognitive, and motivational) were positively correlated with teachers’ job satisfaction. In multiple regression analysis, motivational and metacognitive CQ were related to culturally responsive teaching self-efficacy, whereas motivational and cognitive CQ were significantly related to relevant experiences. In multiple regression analysis, motivational CQ was related to job satisfaction for teachers who taught in predominantly non-White schools. Multiple regression analysis indicated that CQ was not a significant predictor of job satisfaction for teachers in predominantly White schools. These results suggest that CQ may be a useful measure of cultural understanding for K-12 teachers.

*Keywords:* Cultural Intelligence, Job Satisfaction, Culturally Responsive Teaching Self-Efficacy

# CULTURAL INTELLIGENCE IN WHITE AMERICAN TEACHERS

## ACKNOWLEDGMENTS

First and foremost, I am eternally thankful for Dr. Meagan Patterson, who has been nothing short of perfection, as my advisor. With every meeting, I continue to learn from her. This dissertation came to completion with her dedication and countless hours of advising. She guided and supported me in the most delicate way. Through all of my scattered interests, tangents of creative thought, and personal matters—she was there. In a short time, she familiarized me into the world of educational research where I was able to thrive with my counselor lens. For someone who is as organized, kind, and understanding as she, I now know what makes an advisor great. I am inspired to work harder because of her example. Again, I am deeply grateful for her to leadership over the last three and a half years. Without her, I do not think this dissertation process would have been as quick or well done, if it was not for her guidance, feedback and example. Dr. Patterson, thank you for teaching me!

To the members of my committee, I want to thank you for taking the time to offer your gems of knowledge for this study. Each and every one of you has uniquely inspired me. Dr. Ng's perfectly articulated classes on multicultural education and qualitative research harnessed my appreciation for qualitative design and multiculturalism. Dr. Duan's instrumental teachings on multicultural counseling have left an imprint on my professional practice as a counselor. Dr. Hansen's ability to dig deeper into the adolescent mind weighs heavily on my style as I educate school counselors. Lastly, Dr. Peyton for teaching me the key to good measurement in educational research. I owe you all a part of my success.

## CULTURAL INTELLIGENCE IN WHITE AMERICAN TEACHERS

To my husband, Peter, who has been a strong supporter when I set out this goal over ten years ago. He has been with me every inch of the way, and I could not be more thankful to have such a loving partner in the process.

To my parents, who have supported my never-ending drive for more education. Thank you for loving me unconditionally and supporting this Ph.D. process. Thank you for taking such pride in my education and cultural exposure. Without the many trips to Peru, I don't know if I would have found such a strong desire to study culture.

Author

Monica L. Reintjes

# CULTURAL INTELLIGENCE IN WHITE AMERICAN TEACHERS

## Table of Contents

Abstract . . . . .	i
Acknowledgements. . . . .	ii
Introduction. . . . .	1
Literature Review . . . . .	5
Method . . . . .	28
Results. . . . .	33
Discussion . . . . .	39
References . . . . .	56
Tables . . . . .	71
Appendices . . . . .	78

## CHAPTER I: INTRODUCTION

Within classrooms nationwide, there is often a racial “mismatch” between teachers and students (Goldenberg, 2013). Within the public education system, the majority of students are non-White (Krogstad & Fry, 2014; Zong et al., 2018). However, pre-service and practicing teachers are mostly White, middle class, and monolingual speakers of English, often with little or no exposure to diverse backgrounds and cultural knowledge of non-White students (Loewus, 2017; Sleeter, 2008). Also, most pre-service teachers have not examined or challenged their own beliefs, attitudes, and perspectives toward themselves and diverse cultural groups (Ladson-Billings, 2007). Other research has shown that many pre-service teachers do not engage with social, historical, and political issues that relate to inequality and lack opportunities among different cultural groups in social and school settings (Jennings, 2002).

Tying teacher evaluations to test scores can discourage teachers from wanting to work in schools with the neediest students (Baker, 2010). This issue is one, but not the only reason why researchers continue to tackle issues related to closing the “achievement gap.” However, Milner (2010) explains that research should focus on the opportunity gap rather than the achievement gap. Milner (2010) argues that by focusing on the achievement gap, we (i.e., researchers, educators and students) continue to perpetuate the comparison between culturally diverse students and White students without always understanding the cultural underbelly of the disparities and differences that exist. This disparity continues to be underexamined through an appropriate cultural lens (Goldberg, 2013).

The opportunity gap continues to hinder non-White students in their academic performance (Milner, 2010). The opportunity gap creates an “education debt” owed to the non-White students from teachers, educators, and researchers alike (Ladson-Billings, 2014). Some

contributing factors for this opportunity gap include the lack of educational assistance (e.g. lack of school resources), but also societal factors (e.g. poor daily living conditions) (Goldberg, 2013). However, these are just some of the environmental factors that affect non-White students.

This paper will further examine one weighty portion of classroom teaching: culture. In order for teaching to take place within classrooms, students must be engaged. In order for all students to be successful, students must have the opportunity to learn with a curricular framework that emphasizes student skills, interests, and knowledge (Goldberg, 2013). But this does not mean that all non-White students should have to conform to a “dominant” culture by adopting the widely accepted social practices and ideas that are based on the most powerful societal social groups (Carter, 2005) in order to be successful. White Americans are part of the dominant culture and are not usually associated with non-dominant cultures (Milner, 2007, 2010). However, this does not mean that White teachers are incapable of teaching non-White students successfully. It simply means that in order to be successful White teachers must understand that pedagogically they must learn to engage with non-dominant cultures in order to achieve that success (Ladson-Billings, 2009; Nieto, 2004; Milner, 2011, Gay & Howard, 2000).

There continues to be confusion for White teachers on teaching students from many backgrounds and cultures simultaneously in a culturally responsive way. For example, a teacher might have students from Mexico, Myanmar, and Sudan all in a single class. There is more to cultural relevance than the bare minimum of classroom décor or “heroes and holidays” (e.g., celebrating Black History Month, hanging up posters from all ethnicities in a classroom, using diverse names in examples on worksheets). If a teacher can reexamine the fact that non-White students are denied the cultural opportunity to receive appropriate and equitable classroom instruction on a daily basis, then, a teacher will understand the emphasis on the process of

outcomes surrounding teaching and learning (Milner, 2010). This reexamination can contribute to a “call to action” which would benefit teachers and students alike.

There have been many efforts to study this cultural mismatch. Researchers have studied cultural competence, culturally relevant instruction, culturally responsive teaching, cultural humility, global mindset, and many more. This is not a new phenomenon of wanting to understand how people interact interculturally. People want to learn the skills, mindset, and nuances of varied cultural settings in order to be successful whether that be in a business negotiation, religious ceremony or a classroom setting.

Because of the literature aforementioned, the researcher wanted to investigate the concept of Cultural Intelligence (CQ) in a sample of White K-12 teachers. CQ is described as the ability to adapt and relate to others effectively across cultures. Up to this point, CQ has primarily been examined in business settings; in this study I plan to extend the concept of CQ to the realm of education.

First, I examined the relations between and Cultural Intelligence (CQ) and culturally responsive teaching self efficacy. CQ measures an individual’s intercultural motivations, knowledge, behaviors, and reflections (i.e., metacognition), and thus one might anticipate that culturally responsive teaching self efficacy and CQ will be positively related.

Second, I examined the possibility of relations between cultural exposure (or in this case relevant experiences) and CQ. Do relevant experiences (e.g. studying abroad, learning a foreign language, living with a roommate from a different cultural background) relate to a White teacher’s CQ? Would higher exposure increase one’s ability to be culturally intelligent? A relationship one might expect to see is the higher the exposure to relevant experiences the higher the level of cultural intelligence. Some research has noted that studying abroad fosters greater confidence, open-mindedness, ability to see the local and global context, and evoke self-critique



(Cushner & Mahon, 2009). This research informed my investigation into relevant experiences and its impact on CQ. It is important to note here, however, that relations between relevant experiences and CQ are likely bidirectional (i.e., relevant experiences can increase CQ, but higher CQ might also make a person more likely to seek out intercultural experiences).

Third, I examined the possibility of relations between CQ and teachers' job satisfaction. For some White teachers, working in a diverse setting could be greatly satisfying, but for others, not as much. Some research has indicated that White teachers who work in environments where they are not part of the dominant racial group may be at greater risk for job dissatisfaction. Fairfield (2009) found that White teachers who were part of a token group, minority group, or subgroup in relation to their co-workers reported less job satisfaction than those who were part of the majority or dominant group. Thus, in this study I examined the relations between CQ and job satisfaction and whether relations differed by school racial diversity.

In addition to examining the associations of CQ with culturally responsive teaching self-efficacy, relevant experiences, and job satisfaction, in this document I identify some possible improvements in culturally relevant teaching practices and professional development sessions. This work also continues to advocate for non-White academic success and equality, as well as advocacy for ongoing training of White teachers who can flourish in their efforts to promote equitable outcomes for non-White students (Goldenberg, 2013).

## CHAPTER II: LITERATURE REVIEW

Today's teachers are operating in an increasingly diverse school context. Students of color now outnumber White students in U.S. public schools as a whole (Krogstad & Fry, 2014); many students of color are also immigrants or the children of immigrants (Zong, et. al., 2018). However, most K-12 teachers are White and native-born citizens (Loewus, 2017). Thus, it is essential that teachers learn to be responsive to the needs of students who do not share their cultural background.

For the purpose of this dissertation, the primary investigator will define the terms used within this document for clarity. One of the issues with researching the role of culture in teaching is that such work uses a variety of relevant terms, including: diversity, race, ethnicity, racial minority students, students of color, immigrant students, culture, cultural competence, cultural intelligence, and culturally responsive teaching. Many different scholars and researchers use different terminology when describing topics that possess a bit of overlap; therefore, it is important that this researcher clarifies the definitions that will be used within this study.

**Defining students of color.** There are multiple variables that describe students of color. The definition of minority students and students of color differ. For the purpose of this document, my intent when using the term 'students of color' is to include all non-White students including: African American, Latino, Hispanic, Native American, Asian or Pacific Islander descent, and its intent is to be inclusive rather than targeting a specific ethnic group (e.g. people of the same race or nationality who share a distinctive culture). Although some authors use the term minority or racial minority to describe students of color, I have opted to avoid these terms because, as mentioned above, students of color as a group constitute a numerical majority in U.S. schools.

In general, students of color tend to show poorer academic performance than their White peers, a situation commonly referred to as the “achievement gap” (Lee, 2002). This is not universally the case for all students of color, however. Olneck (2005) has noted that some minority groups (e.g., Asian and Asian-American students) actually do better in school than their U.S. born classmates. Conchas (2006) found similar results when looking at Latino immigrant students who have a more positive view of the opportunity structure and are willing to work harder than their U.S. born counterparts. This means that their records of advantages in school performance may go unnoticed or disappear. In addition, it is important to remember that there is individual variability in academic achievement within all racial and ethnic groups, and that individual or environmental factors may predict these individual differences.

In order to assimilate to the majority culture, students from minority or non-White groups may feel pressured to leave their cultural beliefs and norms behind as a way to ‘fit in.’ By disavowing their cultural beliefs students may suffer from disruption in their emotional and cognitive development as a result (Sheets, 1999).

**Defining immigrant students.** Teachers work with children born in the United States to immigrant, second and third-generation American-born parents. The parents of their students may be from different ethnic heritages.

**Defining culture.** In short, culture is the lens through which we see the world. A Dutch psychologist, Geert Hofstede, defined culture as a collective programming of the mind that sets one society apart from another (Hofstede, 1991). In educational and psychological research, culture is most commonly defined based on national or regional origin (e.g., comparing “Western culture” as seen in the United States, Canada, and Western Europe to “East Asian culture” in China, Japan, and South Korea). These national / regional cultures may vary in terms of language, traditions, norms, and values. However, it is important to remember that each of us is

from several different cultures including our national origin, ethnicity, organizational and professional groups, genders, generation, sexual identity, socioeconomic status, religious beliefs and the list goes on and on.

**Defining race.** As with culture, race is a complex construct to define. Race involves sorting individuals into categories such as “Black,” “Asian,” “American Indian,” and “Hispanic or Latino” and recognizing that individuals have connections and shared experiences in their particular cultural or ethnic ancestry (Umana-Taylor, 2014). The constructs of race and ethnicity are distinct, and the long history of racializing social groups in the U.S. makes it particularly critical to recognize that racial categorizations play an important role in identity formation and the lived experience of students of color (Umana-Taylor, 2014).

**Defining culturally responsive teaching.** Teachers need to show their care and respect for students of color. One way to accomplish this is teaching in a culturally responsive way. Gay (2002) defines culturally responsive teaching as “using the cultural characteristics, experiences, and perspectives of diverse students as conduits for teaching them more effectively (p. 106).” A culturally responsive classroom provides students with multiple opportunities to demonstrate what they have learned, uses difficult conversations as teaching moments, and allows teachers and students to work as partners. By using alternative methods (e.g., communication of high expectations, positive perspectives of parents and families, collaboratively building relevant topics covered in the classroom) teachers could further their reach with students.

A teacher may have students from China, Sudan, Mexico and Japan in a single classroom. It is very difficult for a teacher to have in-depth knowledge of all of these cultural contexts. In addition, having knowledge of students’ cultural backgrounds is not sufficient for building positive relationships with students and promoting academic achievement. Teachers

need to process more than awareness of different cultures. Respect and recognition that others hold different values than their own is also important (Porter & Somovar, 1991).

Research on promoting culturally responsive teaching has used a variety of frameworks, including multicultural education, cultural competence, cultural humility, and emotional intelligence. This study aims to understand how the cultural intelligence framework can inform the literature on culturally responsive teaching. This study strives to further contribute to the literature regarding CQ and expand the literature on how to connect with students in a culturally responsive way. By examining teachers' attitudes toward diverse learners, administration and teachers may be able to understand where some gaps in training, school wide initiatives, or professional development may remain for their teachers or school districts as a whole.

### **Teacher attitudes toward students of color**

How do White teachers perceive students of color? Research indicates that teachers' expectations for, perceptions of, and behavior toward students may be influenced by students' racial and ethnic backgrounds.

**Lower expectations.** Teachers generally have lower academic expectations for African American and Latino students relative to White and Asian American students (Gershenson et al., 2016; Kozlowski, 2015). Teacher perceptions may lead to differential treatment of students of color, which may in turn produce differences in academic performance (i.e., self-fulfilling prophecies; Jussim et al., 1996). Teacher expectations may be more likely to result in self-fulfilling prophecies for students of color than for White students (Jussim et al., 1996). Teachers' academic expectations can predict students' academic outcomes for children as young as preschool (Alvidrez & Weinstein, 1999; Hinnant et al., 2009; Rubie-Davies et al., 2006; Sorhagen, 2013, Baker et al., 2015). Some researchers have argued that teacher perceptions

(particularly White teachers' perceptions of African American students) are a major contributor to the Black-White achievement gap in academic performance (Oats, 2003).

**More disciplinary referrals.** Teachers may also perceive student behavior differently based on students' racial backgrounds. These differing perceptions may lead to students of color being suspended or expelled more frequently than White students (Office of Civil Rights, 2013; Skiba et al., 2000; Rudd, 2014). Various factors may contribute to these racial discrepancies in disciplinary referrals. One possibility is that teachers, due to either explicit or implicit racial bias, are opting to punish students of color more severely than White students. Relevant data indicates that, relative to White students, African American students seem to be referred to principals for discipline based on less serious and more subjective reasons (Gregory, Skiba, & Noguera, 2010).

Another explanation may be that, at least in certain contexts, students of color may be more likely to engage in "confrontational practices" (e.g. behaviors that are problematic, disruptive or disrespectful and violate school rules). These oppositional behaviors are important when looked at, more specifically, from a political lens. Oppositional behaviors may arise from a place of personal injustice. Some students act out as a critical interpretation of schools as an oppressive institution. Other researchers call this "resistance of a transformative form," (Yosso, 2005). Yosso (2005) notes that this practice of justice is a conscious effort to bring attention to what is necessary for the institution to notice or take note of the attitudes, practices, or policies that are harmful to students of color.

Oppositional attitudes or behaviors are not a new phenomenon that solely develop in school, however, it could further affirm the rejections that non-White students feel and have felt from mainstream society. Students of color develop identities that oppose education when they believe that society will not reward them for their hard work (Velez & Cano, 2008). For them, educational credentials and job ceilings make the completion of educational milestones

immaterial when it comes to socioeconomic mobility. Fine (1991) notes that hard work in school does not pay off for students of color because society has been structured to limit their opportunities.

Success in school can come with a heavy price for members of non-White groups. Successful students are stereotyped as characteristically “White” or middle-class behavior which competes with a student’s racial identity (McLaren, 1995). Therefore, it is difficult for oppressed non-White students to have a healthy development of racial identity and be successful in school simultaneously. This high price to pay, for a student, can be problematic, especially during the development of an adolescent who is highly invested in acceptance from their peer group. However, some research has found that a healthy racial identity as well as cultural identity can coexist with high academic achievement, more specifically in Latino students (Flores-Gonzalez, 1999).

### **Factors that influence teacher attitudes**

Research indicates that a variety of factors may relate to teachers’ attitudes toward and treatment of students of color, including racial bias, colorblindness, exposure to cultural outgroups, intercultural exchanges, and training or coursework (e.g., multicultural education courses).

**Bias.** One factor that influences teachers’ perception of their students is bias. According to social categorization theory, humans tend to decide in the first 10 seconds of interaction whether another person is “in” or “out” of one’s own social category, and this decision may influence behaviors toward the other person (Allport, 1954; Bruner, 1957; Tajfel & Wilkes, 1963). By using this theory, self-categorization reflects on “a complex and creative interaction between motives, expectations, knowledge and reality,” (Turner, 1999, p. 31). The context and situation influence this behavioral adjustment and decision; however, Dee and Gershenson

(2017) describe that bias can be both unconscious and conscious. Both conscious and unconscious bias can affect future decision-making (Dee & Gershenson, 2017). Exposure to teacher bias can reaffirm self-fulfilling prophecies even when stereotypes were initially untrue (Dee & Gershenson, 2017). Thus, the bias of teachers and administration plays a large role in the contribution to the persistent gaps in academic achievement among students of color and their White peers.

Asking teachers to directly face their bias can be a difficult task. Even after the completion of a multicultural identity course, some teachers still advocate for the “myth of meritocracy,” (Mills, 2008). Causey (2000) argues that if teachers could begin to challenge their deficit type thinking (or bias) that they would, then, feel they must deny their privileges they enjoy because of their skin color and social class (Causey et al., 2000).

**Colorblindness.** Racial attitudes among racial majority (e.g., White American) individuals have often been examined through the framework of “color-blindness”. Color-blind racial attitudes suggest that individuals should not notice race, that race is not important, or that openly discussing race promotes racial conflict (Bonilla-Silva, 2010). This ideology is based on the faulty assumption that by not noticing race, one can prevent or reduce racist attitudes. Many teachers use color blindness as a way to dodge the very important issue of race. For example, Johnson (2002), presents a quotation from Carol, a White elementary school teacher: “I thought it was wrong to see color. Like the T-shirts that say, “Love Sees No Color.” As I’ve come to learn, you’re missing the person who is that color. You’re missing a big part of that person if you refuse to see it. . . . My eyes have been opened.”. Carol, like many other teachers, thought that having a color-blind stance was the best way to address race in her classroom.

**Exposure to cultural outgroups.** Another factor that influences teachers’ perceptions of non-White students is their exposure to different cultural groups. Teachers can move beyond bias



and a color-blind approach by exposure early in life. Feiman-Nemser (1983) noted that teaching starts long before coursework and internship. Teachers enter the classroom having already been taught so much. Teaching is shaped by culture rooted in personal experiences with parents, teachers, images and patterns of behavior (Feiman-Nemser, 1983).

Pope (2005) found that preservice teachers, who placed a higher value on diversity and working with students of non-White backgrounds, reported more frequent interactions with members of cultural outgroups (i.e., individuals whose racial or cultural background differed from one's own) through church, community, social events, student-teaching school, student-teaching classroom, and parent-teaching meetings. Because of this research, one might see a similar result in the present study when looking at relevant experiences and CQ.

**Intercultural exchanges.** Intercultural experiences can be in homes or other contexts (e.g., schools, workplaces). Experiences such as living abroad may be especially influential in promoting intercultural awareness and sensitivity (Gregersen, Morrison, & Black, 1998). These cross-cultural experiences can help individuals build personal and professional development.

Research has indicated that studying abroad can enhance cross cultural experiences and enrich one's ability to see the world from a global understanding (Wolf, 2007; Carlson & Widaman, 1988). Other research has explored the benefits of study abroad programs which include supporting maturity and objectivity when visiting foreign countries (Cushner & Karim, 2004), complex intercultural communication skills (Langley & Breese, 2005; Williams 2005), and, perhaps the most important, increased reflective thought, self-reliance, and self-confidence (McCabe, 1994; 2001).

Other studies suggest that positive relationships between multicultural experiences and creative cognition exist (Lee, 2012). Lee (2012) found that studying abroad supports cognitive processes involved in developing innovative solutions in response to a culturally diverse

environment. Also, cognitive benefits were present in students' overall (domain-free) creative thinking capacities. These findings prove that study abroad could be related to creative problem solving or creative cultural adaptation (e.g., a student cannot speak the foreign language, then may take out their cell phone or draw something on a paper or napkin in order to bridge the gap in linguistic mismatch). However, there was no difference in students who studied abroad to those who did not study abroad in academic achievement (Lee, 2012).

With this argument in mind, there is little research on exposure to studying abroad and cultural intelligence or other aspects of cultural competence in teachers. If this relationship proves to be significant and positively related one might be interested in learning what other exposures could support cultural intelligence in teacher development. However, a gap in understanding of how these experiences that are both "foreign" domestically and internationally build cultural awareness.

**Training and coursework.** Educational programs (e.g., multicultural education courses) can also influence teachers' attitudes toward diversity (Lawrence & Tatum, 1997; Mills, 2008; Frankenburg, 1993). Pope and Wilder (2005) found that student teaching teachers who were high in valuing diversity reported reading more articles related to diversity throughout their educational experience compared to the low valuing of diversity group. Add-on classes can help enhance teacher preparation to work with diverse student populations within educational settings (Pope & Wilder, 2005).

The impact of coursework, particularly single courses in diversity or multicultural education, may be limited, however. Some researchers have argued that these courses may influence teaching practices without promoting change in attitudes or deeper understanding of life as a racialized being (Gay, 2002). The ways in which diversity-related coursework may influence attitudes or behaviors is not fully understood. For example, Lawrence and Tatum

(1997) suspect that dialogue with teachers of color in their classrooms may have been a factor in the increased racial awareness of White teachers.

### **Culturally responsive teaching**

**What is culturally responsive teaching?** Validation for students of colors is critical since outside of school walls, they may be treated differently. Students thrive towards academic success from a basis of cultural validation (Gay, 2002). In culturally responsive teaching, teachers use students' knowledge, experiences and preferences to serve as guidance in curriculum design (Siwatu, 2005). Teaching in a culturally responsive way benefits teachers and students in two ways. The process allows for teachers to understand their students and their students further understand themselves and their cultural orientations. This process can aid in a healthy cultural identity development. This teaching method also provides students with several opportunities to demonstrate what they know and further question what they believe about the knowledge they have gained.

An educator can make the changes necessary in order to improve his or her overall quality of teaching as it relates to cultural relevance (Ladson-Billings, 1995; Gay, 2002; Siwatu, 2005). Teachers can help students by allowing them to further discover their cultural identity, native language and connection to the material. This is what it means to care for students in a cultural way. Teachers should care about student learning as a milestone within moral development, a social responsibility and a necessity (Gay, 2002). Everyday teachers interact and listen to their students and the stories they bring to class; yet, how many teachers are using these stories to inform curriculum design? A teacher who overlooks this opportunity may stymie their chance for a deeper connection with their students. Teachers could incorporate class material that relates to ethnically non-White groups (Gay, 2002). This gesture of including non-White groups in the course material allows for a teacher to care about their students' community. Gay (2002)

advocates for this practice of teachers and students working together as *partners*; Neither teacher, nor student is more important in learning; they are a team. Gay (2007) defines this practice as action-oriented, not passive—in order to create an imaginative strategy to ensure success for their non-White students. This creates equal partnership for both the teacher and the student, which could help build trust overtime.

Geneva Gay (2002) recommends that teachers develop cultural scaffolding—by using their *own* cultural experiences to expand their abilities academically and intellectually (Gay, 2007). By using this approach, students can more easily connect with material because it feels familiar or relevant. By doing this in a school setting, teachers provide many things: messages of equal opportunity, respect, honor, integrity, and a deep belief in the possibility of change in how society treats the culturally diverse (Gay, 2007).

**Characteristics of culturally responsive teaching.** For the purpose of this study, the researcher will adopt Gloria Ladson-Billings's (1994) framework to describe what characteristics make up culturally responsive teaching. These characteristics include: positive perspectives on guardians and families, communication of high expectations, learning within the context of culture, student-centered instruction, culturally mediated instruction, reshaping the curriculum, and the role of teacher as a facilitator in the classroom. Schools that use culturally responsive teaching practices will establish mechanisms to handle racial/cultural tensions and provide forums for students to discuss their diverse cultural backgrounds with each other in order to learn from each other (Lee, 2002).

***Positive perspectives on guardians and families.*** Positive perspectives on guardians and families is one of the most critical ways a teacher can be culturally responsive. [Teachers] must investigate which strengths each of their students and family have (Falicov, 2014). This student-centered approach is an example of how teachers might build positive perspectives with parents

and families. Another suggestion by Nieto (1996) includes a simple exchange of words in a variety of ways (e.g. a phone conversation, a home visit, or a newsletter) to keep connectivity with families. These simple practices cultivate and maintain a positive connection with their families. Cultural differences and religious associations can lead to absences from school or prevent student involvement in extra-curricular activities. For this reason, teachers should try to be aware of the unique set of values and beliefs each family has (Nieto, 1996). Moll et. al (1992) advocates for a practice of constant communication with guardians for student success. This can be difficult in some settings when parents work and are notoriously unavailable, however it is the gesture of wanting to connect that is important, in some cultures. Cultural instruction and curriculum make classroom material more personalized and meaningful. This instructional process is less arduous if a teacher gains an understanding of their students' background, abilities and how they learn best.

[Non-White] students are more likely than White students to have been raised with beliefs that the welfare of the family or the group supersede that of the individual (Gay, 2007). The group mentality is understood at a very young age. As a result, students make choices based on what is best for the family unit (Gay, 2007). Therefore, it is vital for teachers to understand their students and make connections with the non-White families and communities.

***Communication of high expectations.*** Encouraging students to meet clear expectations is a teacher's job day to day. The other part of that job offers praise and validation when those expectations are met. Rist (1970) reports that the high expectations help students develop a healthy self-concept (including awareness of both strengths and weaknesses). This reinforcement could help reinforce drive or motivation. High expectations should be encouraged by all teachers, administrators and staff. This means that teachers create adaptable lesson plans for everyone, not just the academically inclined.

***Learning within the context of culture.*** Teachers can adopt an eclectic teaching style to accommodate many cultural backgrounds. To do this, teachers use curriculum design featuring cooperative learning, independent work, role-play strategies, flipping classroom techniques, investigative research projects on community issues, or providing various options for completing an assignment. Additionally, teachers can effectively address the cultural mismatch by talking to students about distinctions among individuals and reinforcing the message that cultural difference among students can create an enhanced learning environment. Building on cultural opportunities (e.g. community fairs and religious events) builds more opportunity for introspective reflection and group work. These simple adjustments show that learning can occur in the context of culture.

Schools that adopt the “salad bowl” approach as opposed to the melting pot philosophy of diversity forge a sense of community and opportunity. This infusion of cultures rather than separation helps capitalize on inclusion and maintain academic standards (i.e. the same high expectations for all students). Such schools will develop curricula that is not Eurocentric, but instead focuses on inclusion of contributions from all cultures (Lee, 2002). Additionally, schools that go beyond merely recognizing National Hispanic Heritage Month or Black History Month are more likely to reach students on a deeper level.

***Student-centered instruction.*** Students become more self-confident, self-directed, and self-efficacious when learning at their own pace. Student-centered instruction can start with something as simple as language (e.g., allowing ELL students to respond to questions in their native language) (Ladson-Billings, 1995). Teachers can share responsibilities of instruction through, as mentioned before, cooperative learning groups (Padron, Waxman, & Riversa, 2002), or student lead discussion groups to emphasize different schools of thought. Teachers can also allow student choice in multiple ways (e.g., what book to read for a book report). This type of

learning promotes independence. By interacting with both other classroom students and adults, students can become more knowledgeable in hypothesizing, testing and exploring their new ideas (Darling-Hammond, 1997).

To become a cultural advocate for [non-White] students, teachers must understand that learning across cultures can change (Ladson-Billings, 1994). For example, academic efforts and work styles among non-White students (e.g. African American, Latino, or Asian Americans) may differ (Tharp, 1989). Therefore, it is important for teachers to understand the learning needs for each of their non-White students.

***Culturally mediated instruction.*** Instruction is culturally mediated when it includes multicultural viewpoints and allows for inclusion of knowledge that is relevant to the students (Hollins, 1996). Teachers can do this simply by researching students' experiences with learning and teaching styles (e.g. visiting the communities of their students to find out how they interact and relate to their environments, asking students their preference in learning styles, interviewing their parents to see how and what students learn from them). Learning happens in culturally appropriate social situations meaning that students and teachers have a relationship that understands the students' cultures. Having a variety of viewpoints and perspectives allows for students to resonate with any given situation which allows for cultural and social reactions. Within cultural instruction, students become active participants in their learning (Nieto, 1996). Hollins (1996) believes that culturally mediated instruction provides the best opportunity to meet the needs of all students.

***Reshaping the curriculum.*** The design should be integrated, interdisciplinary, and student centered for the curriculum to facilitate new knowledge (Hollins, 1996). Student narratives provide strong connections between material and real life situations (Padron, Waxman, & Rivera, 2002) which can enhance problem solving and critical thinking skills. Other

ways to reshape curriculum include student led activities (e.g. interviewing members of the community or debating alternate points of view). Permitting students to engage in cooperative learning in groups or independently allows for students to continue to challenge their current opinions to formulate and mature, but also cultivate a deeper knowledge base for critical thinking (Villegas, 1991). School wide initiatives that push reshaping curriculum allow for investigation into the daily grind (e.g. testing, policies, hiring practices, and other instructional practices). All of the day-to-day interactions contribute to the school climate. Therefore, commitment to reshaping curriculum is necessary as a school-wide effort.

***Teacher as facilitator.*** Teachers serve as a catalyst for student cultural learning. Examples of how teachers can do this in a variety of ways follow. Students could investigate aspects of their culture (e.g. writing a short story about a family tradition or sharing artifacts from home that reflect their culture). Teachers can initiate cooperative learning groups (e.g. have the students participate in a book club or literature circle, or use student led discussion groups (Brisk & Harrington, 2000; Padron, Waxman, & Rivera, 2002; Daniels, 2002). Teachers who capitalize on community members or parents as speakers in their classrooms provide variety, entertainment, and, at the same time, show alternative ways of looking at problems for their students in a creative delivery (Ladson-Billings, 1995). For an example, Gertrude Winston—a White woman—who has taught for over 40 years, used this same technique to provide buy-in, relevance, and cultural perspective—all to her advantage (Ladson-Billings, 1995). Every year Gertrude would poll her students in terms of occupations of their parents or relatives that they knew. From this information, she was able to create workshops. By engaging with her students' families and relatives she was able to take stock of her students and learn more about who they are and their own experiences with the world. A teacher can ask community members to assist in the classroom by demonstrating a lesson in their professional fields. This design helps students



glean meaning. Another way teacher can facilitate inclusivity is their use of language. By using easily understood language, teachers make their classrooms an effective learning environment for the ELL population (Yedlin, 2004). These suggestions act as a guide to facilitate the connection between culture and community.

**Factors that promote culturally responsive teaching.** A number of factors may make individual teachers more or less willing to engage in culturally responsive teaching practices. These include cross-cultural experiences, teacher attitudes (e.g., beliefs about what is and is not a teacher's responsibility), and engagement with coursework or professional development in the area of multicultural education.

***Cross-cultural experiences.*** International experience has been proposed as a heavy factor that contributes to the development of higher levels of CQ, but its effects on CQ are often assumed (Chao, et. al., 2017). Earley and Peterson (2003) argue that purposeful overseas exposure and experiential learning interventions can aid in development of motivational and behavioral CQ as well as some aspects of the cognitive CQ. Relevant experiences (e.g. study abroad, learning a foreign language) can be indicative of mindset, satisfaction and outlook on interactions.

***Teacher attitudes.*** Some White teachers are highly aware of the importance of race and racism for their work as educators. A variety of factors might promote such views, including an "outsider" identity due to factors such as class background or sexual orientation, experiences living and working with individuals of other races that allow for broader perspectives on race and racism, and personal religious or ethical beliefs that emphasized equality and social justice (Johnson, 2002). In contrast, some preservice teachers bring strong biases or negative stereotypes with them into teacher education programs, thus are unlikely to develop professional beliefs and behaviors consistent with multicultural sensitivity and responsiveness (Pohan, 1996).

Other teachers believe that they have no reason to connect with this sort of deeply personal, individualistic, political area of their lives because their subjects are still teachable without addressing this touchy area. Many educators in Science, Technology, Engineering and Mathematics (STEM) fields feel that culturally responsive teaching is a stretch for their subjects (Gay, 2002). This misinformation makes it difficult for others to view the *value* that could come from culturally responsive teaching (Gay, 2002).

***Multicultural education coursework.*** Training in the importance of multicultural education and related instructional strategies plays a key role in promoting culturally responsive teaching. For example, in a study by Fitchett (2012), found that preservice teachers who were exposed to in-depth culturally responsive teaching epistemology had higher levels of confidences in their abilities to teach in a culturally responsive way (Fitchett, et al., 2012).

Scholars in the field of multicultural education argue that such courses should offer experiences that enable preservice teachers to understand and examine their own experiences, as a starting point for developing insight into beliefs and assumptions about culture and class, (Allard & Santaro, 2004). This self-exploration of understanding one's own culture is one of the major tenets within Siwatu's culturally responsive pedagogy.

One criticism of multicultural education coursework is that material related to multicultural education is often presented in an add-on or piecemeal manner, which does not result in changing attitudes regarding diversity (Banks, 2001; McDonald, 2005; Sleeter, 2008). Perhaps, some education programs are not preparing teachers adequately to teach about multiculturalism and how to explore creative, alternative approaches to teaching on a low-cost budget. Tailored examples and exercises might help teachers to practice, vocalize clear concerns, and explore how to further one's analysis of how to better his or her preparation of multiculturalism within curriculum.

Educators must learn more than the “basics” about cultural groups. The basics are referring to distorted information portrayed by pop culture and stereotypes that lack the depth of analysis of multicultural education (Gay, 2002). For teachers who struggle with discussions around culture or White privilege may stymie success in the classroom. The multicultural courses in education are a good jumping off point for what could be an introduction to [multicultural] psychology (Arredondo, 2014). Confessing to benefitting from White privilege does not allow [educators] much insight into the lives as racialized beings. This makes it difficult for them to understand the structure that privilege plays in society. Lensmire (2013) argues that White privilege pedagogy does not point toward action that can lead to structural change (Lensmire, 2013).

### **Cultural Intelligence**

**Inception of Cultural Intelligence.** Intercultural Competence was the one of the first constructs in this movement. It was defined by Hammer, Bennett, & Wiseman (2003) as the skill to think and act in interculturally appropriate ways. More specifically, it is the ability to draw on all the knowledge, skills and personal characteristics to work well with people from different national and cultural backgrounds at home or abroad (Johnson, Lenartowicz, & Apud, 2006). There are more than 30 intercultural competence models and more than 300 personal characteristics as sources of intercultural competence (Leung, Ang, & Tan, 2014).

There are three different areas that cultural competence research follows (Raver & Van Dyne, 2018). First, an area that focuses on intercultural competence as an individual perspective and conceptualizes competence as personal traits (e.g., open mindedness, cognitive complexity). A second area focuses on intercultural attitudes and worldviews (e.g., ethnocentric and ethno-relative worldviews, and overall outlooks). A third area of research focuses on conceptualizing

intercultural competence as a set of skills (e.g., knowledge and skills used in intercultural contexts).

However, the field of research on intercultural competence has been criticized as lacking a clear theoretical foundation (Ang et al., 2007). In response to this critique, Ang et al. developed a theoretical framework that they labeled cultural intelligence. Earley & Ang (2003) created a cultural intelligence scale (CQS) with predictive validity in various sectors including athletics, performance, leadership, team trust, intercultural adjustment and others (Ang et al., 2007; Ang, Van Dyne, & Rockstuhl, 2015).

**Scholarship on Cultural Intelligence is evolving.** Recently, this cultural intelligence (CQ) framework has gained popularity in psychology, particularly industrial / organizational psychology, due to increasing globalization and workforce diversification (Van Dyne, et. al., 2012). Cultural intelligence is the ability to function effectively in intercultural contexts (i.e., the ability to work well with people from different cultural backgrounds at home or abroad; Early & Ang, 2003) which plays a large role in how we interact with each other. However, most of the research surrounding this framework comes from the business sector. The reason this measure is gaining in popularity is because it offers a parsimonious, synthesis of four dimensions that represent a higher-level link back to abstract concepts, whereas previous cross-cultural measures lack validity and have unstable factor structures according to Matsumoto and Hwang's (2013) review.

**Defining Cultural Intelligence.** Cultural Intelligence (CQ) has been conceptualized as a set of intercultural capabilities that reflect the degree to which an individual can function in an intercultural context (Ang & Van Dyne, 2008; Early & Ang, 2003). Thus, CQ fits into the framework of viewing intercultural competence as a set of skills. CQ is made up of four different areas: drive/motivation, knowledge/cognitive, strategy/metacognitive and action/behavioral.

The people who have the most cultural intelligence may come as a shock. It may not be the well-traveled, the CEO's, or even the multilingual (Livermore, 2015). It can be anyone with these four themes (described below) that really set other people apart from the rest. Moreover, we should expect that teachers who have higher cultural intelligence scores would feel more efficacious and comfortable when working with students and families from different backgrounds.

CQ Drive is expressing and holding a genuine interest in cross cultural issues. CQ Drive is also described as one's motivation to direct and sustain effort in functioning in cross cultural settings or situations. A teacher who would score highly in this subset would have confidence in the way they are able to function effectively in diverse settings, which helps their overall rapport with families, or connections with students. Such a teacher would be highly motivated to learn about other cultures and interact with people from different cultural backgrounds, and have a high self-efficacy in such interactions, all of which are very important when interacting with families, students, and extended families of culturally different populations.

CQ Knowledge is the ability to grasp similarities and differences between cultures. A teacher who scores highly in the section would, for example, understand that Latin American Hispanic culture is vastly different from Latin-European culture. A teacher who would score highly on this measure might be a social studies teacher or have a good understanding of economic systems in different countries. He or she would obtain a further understanding of the ethnographic tensions that happen in other societies. In short, it is an expansion of cultural understanding. This is the cognitive skill and a cognitive tenet of the measure that includes the general knowledge about cultures and cultural nuances both in culture-general and culture specific situations (e.g. social norms, economic systems, cultural practices, important relationships within family systems).

CQ Strategy or the metacognitive skillset is a person who can be aware and plan across cultural issues. This teacher could ‘think about thinking’ within the realm of intercultural interactions. This teacher has the ability to acquire, assess, and understand cultural knowledge. This is not to be confused with simply knowing information about a particular cultural group; a teacher who scores highly in this category would know to plan for cultural interactions, maintain awareness of what is happening during the interaction and, as a reaction, take stock of the cultural differences that occur and check and revise assumptions about that particular cultural interaction and group. This ability would allow for teachers to have some degree of control over their own thought processes about cultural differences.

CQ Action is known as the behavioral part of the measure and is the ability to appropriately adapt behavior across cultural scenarios. This would mean that this teacher, at their best, could exhibit flexibility in verbal behaviors, non-verbal behaviors and speech acts when adapting to other cultural contexts. This type of teacher would show ease and flexibility in her delivery style, but also be able to come off as understanding and adaptable to her students and families.

**Outcomes associated with Cultural Intelligence.** CQ predicts a variety of important outcomes in intercultural contexts (e.g., cultural adaptation, expatriate performance, global leadership, intercultural negotiation). CQ predicts positive outcomes for both individuals and teams working in culturally diverse contexts (Ang et al., 2007; Templer, Tay, & Chandrasekar, 2006). For example, CQ was positively related to group cohesion, efficacy, trust, and learning for members of multinational MBA teams (Moynihan, Peterson, & Earley, 2006). Additionally, CQ can influence the efficacy of interventions aimed at enhancing intercultural effectiveness (Chen et al., 2010).

Some empirical data shows that the experiences and results of CQ often differ across the four sub-dimensions (Ang et al., 2015). Magnusson et al. (2013) report that export managers with high motivational CQ were able to incorporate mixed marketing adaptations based on their observations of perceived differences in home market and export market transactions, and those with high metacognitive CQ were able to implement those shifts in approach effectively. Chen et al. (2010) shows that having high motivational CQ predicts expatriates' job performance (e.g., work adjustment). Mor et al. (2013) found that of those with high levels of metacognitive CQ have other skillsets (e.g. practice cultural perspectives).

CQ can influence how individuals will adapt to differences in cultural environments, which hopefully would translate to the classroom for teachers. Vader & Van Dyne (2018) continue to push for a strong need for additional research and training on the four capabilities because this should provide more insights than research on the overall construct.

**Cultural Intelligence in educational settings.** There is little research on Cultural Intelligence in educational settings. In a related study that used the CQ framework, Molina (2013) found that teachers used cultural knowledge in understanding and approaching their daily tasks when working with students, but it was far more complex than the measure was able to capture used for her study. Molina (2013) found that more than half of her 12 teachers held some resentment in how culture was incorporated into their schools (e.g., Black History Month). This study is a great example of how many teachers understand culture and how it relates to their students, but when asked how to incorporate the cultural knowledge that they hold they fall back on very similar ethnocentric/worldview narratives in which each student is viewed as having his or her own individual cultural identity, based on factors such as background experiences, family structure, and socioeconomic level (Molina, 2013).

Other educational research focuses on framework surrounding “sociocultural consciousness,” which is an awareness that helps teachers negotiate their interactions with their students while understanding that those interactions are mediated by social backgrounds (Molina, 2012). This construct adds to the body of research on world views which affect individuals’ experiences and backgrounds (Banks et al., 2001). In a similar way, cultural intelligence aims to help individuals develop a conscious awareness of their unconscious bias, so the further development of cultural intelligence can be attained. These biases (e.g. gender, religion, race, culture, and sexuality) weigh heavily in how teachers interact with their students, so it is important to bring awareness of bias to teachers.

### **The Current Study**

It is important to study practicing teachers’ cultural intelligence (CQ) in order gain a better understanding of how they can continue to cultivate a relationship with those students who are culturally different. Not only is this area difficult to implement in practice, but it is beneficial to recognize how sub-dimensions of cultural intelligence can help teachers feel more efficacious in intercultural interactions with students and families (Raver & Van Dyne, 2018).

The current study will examine the four sub-dimensions of CQ in a sample of White practicing teachers, as well as how CQ relates to relevant experiences (e.g., studying or living abroad), culturally responsive teaching self-efficacy, and teachers’ job satisfaction.



## CHAPTER III: METHOD

### Purpose of the Study

This study examines how the four subscales of Cultural Intelligence (i.e., cognitive, metacognitive, motivational, and behavioral) relate to culturally responsive teaching self-efficacy, job satisfaction, and relevant experiences.

### Participants

Participants were recruited using Amazon's Mechanical Turk and online recruitment through University of Kansas SONA system. In order to be included in analyses, participants were required to live in the United States, identify themselves as White, and be practicing teachers with at least one school year of experience teaching in a K-12 setting (not including student teaching). Participants who failed more than one attention check item (out of four items total) were also excluded from analyses. The original sample included 228 participants; the final sample used for analyses included 130 participants (57% of the original sample; see results chapter for description of sample selection process).

The mean age for participating teachers was 37 years. The ages ranged from 21 to 67 ( $SD = .57$ ). The mean years of teaching experience was 8.9 and ranged from 1 to 39 ( $SD = 7.93$ ). The gender for this sample of White teachers included 86 (66.2%) female and 43 (33.1%) male and 1 (0.8%) person who did not disclose their gender.

### Procedure

Participants were asked to answer a short set of questions to make sure they were eligible for the study (e.g., at least one year of teaching experience) before proceeding to the survey part of the study. The teachers were asked to read an informed consent statement and indicate their willingness to participate in the study. Participants then completed all study measures (e.g. Culturally Responsive Teaching Self-Efficacy, Cultural Intelligence, Relevant Experience, Job

Satisfaction) through an online survey format. Lastly, the teachers filled out a measure of demographic information (e.g., gender, age, and education level). Participants who used the Mechanical Turk system received \$2.50 for completing the study. Participants who used the SONA system received course credit for completing the study.

## Measures

**Demographic information.** Participants were asked to report their gender, age, race, educational level, and years of teaching experience. See appendix D for demographic information measure.

**Culturally responsive teaching self-efficacy.** Culturally responsive teaching self-efficacy was measured with the Culturally Responsive Teaching Self-Efficacy Scale (CRTSE; Siwatu, 2007). This measure includes 40 items designed to tap teachers' self-perceived ability to implement culturally sensitive and responsive teaching practices (e.g., "I am able to design a classroom environment using displays that reflects a variety of cultures"; "I am able to identify ways that standardized tests may be biased towards linguistically diverse students"). Participants respond to each item on a scale from 0 to 100 indicating their level of confidence to engage in a given practice with 0 indicate *no confidence at all* to 100 indicating *completely confident in my abilities*. A mean score across all items is calculated and thus the possible range of scores is 0 to 100. See Table 1 for reliability information and Appendix B for full measure.

Siwatu (2007) created the measure of Culturally Responsive Teaching Self Efficacy originally in an effort to capture specific teaching practices that would be used by teachers who are practicing culturally responsive teaching pedagogy. The scale consists of 40 items in which participants are then asked how confident they are in their ability to engage in certain teaching practices. In previous research (Frichett, 2012) the measure was found to have high inter-item reliability in each of preservice teachers' CRTSE beliefs ( $\alpha = .92$ ). These items within the scale

were interpreted and validated as self-efficacy constructs Siwatu (2011). Siwatu's measurement tool underwent much scrutiny when conducted in 2007 which included a factor analysis in order to test reliability. This measure of CRTSE has also been used in many studies examining relationships between culturally relevant teaching self-efficacy and teaching (Fichett, 2012; Siwatu, 2009; Siwatu, Polydore & Starker, 2009; Siwatu & Starker, 2010).

**Cultural intelligence.** The Cultural Intelligence measure (Ang et al., 2007) measures four aspects of cultural intelligence: metacognitive, cognitive, motivational and behavioral elements. Metacognitive CQ refers to higher order cognitive processes involved in taking stock of cultural knowledge, and monitoring actions and controlling individual thought processes (9 items; e.g. "I think about possible cultural differences before meeting people from other cultures"). Cognitive CQ is the knowledge about practices and norms (10 items; e.g. "I can describe similarities and differences in legal, economic, and political systems across cultures") in different cultures. Motivational CQ refers to intrinsic interest and sense of enjoyment in acquiring knowledge about other cultures (9 items; e.g. "Given a choice, I prefer work groups composed of people with different (rather than similar) cultural backgrounds"), whereas behavioral CQ is the extent to which individuals are able to adapt their verbal and nonverbal practices (8 items; e.g. "I change my use of pause and silence to suit different cultural situations"), in intercultural experiences (Chao et. al., 2017). Response options ranged from strongly disagree (1) to strongly agree (7). See Appendix A for full measure. See Table 1 for reliability information.

**Job satisfaction.** Job satisfaction was measured in this study with the Job Descriptive Index (Smith, Kendall, & Hulin, 1969). The JDI examines the cognitive components of job satisfaction and is one of the most widely used measures. It measures how the employee feels about their job and the people present in their workplace. The JDI is comprised of five facets: pay, promotions and promotion opportunities, coworkers, supervision and the work itself, pay.

Although for this study, participants completed only the “work on present job” (18 items) and “job in general” (18 items) facets. For each item, participants are asked if a particular word or phrase (e.g., “challenging”, “dull”) describes their work. Response options are “yes” (scored as 3), “no” (scored as 0), and “?” (scored as 1). Job satisfaction may have strong implications towards job attitudes in general, which this study aims to explore the relationship between JDI and school diversity. See Appendix E for full measure. See Table 1 for reliability information.

**Relevant experiences.** This study explores the relationship between relevant experiences (both domestically and internationally) and cultural intelligence in teachers. For this measure, we asked participants to indicate whether they had engaged in a variety of activities that might promote cultural awareness, such as studying abroad and learning a foreign language. The measure included 22 yes / no items. “Yes” responses were coded as 1, and “No” responses were coded as 0. Possible scores ranged from 0 to 22. See Appendix C for full measure. Other research has found that international experience (e.g., number of countries lived in) was positively and significantly related to metacognitive CQ, motivational CQ, and cognitive CQ (Eisenberg, 2013). Therefore, in the present study we may see similar results.

**School diversity.** All participants were asked to report the name and location (zip code) of the school in which they teach. I used this information to access publicly available information on school racial composition. School racial composition was broken down into two groups: predominantly White (less than 50% non-White students) and predominantly non-White (greater than 50% non-white students).

## **Hypotheses**

Based on the related literature, it was expected that:

H1. All four CQ subscales would be positively related to culturally responsive teaching self-efficacy.

H2. All four CQ subscales would be positively related to the measure of relevant experiences.

H3. All four CQ subscales would be positively related to job satisfaction for teachers who teach in schools with high percentages of non-White students. CQ would be unrelated to job satisfaction for teachers who teach in predominantly White schools.

## CHAPTER IV: RESULTS

### Data Preparation

**Removal of non-qualified participants.** Upon completion of the data collection, the survey population demographic variables were sorted through to eliminate all participants who did not meet qualifications (e.g., located outside of the U.S., not a practicing K-12 teacher). I also eliminated all participants who did not complete the questionnaire in its entirety. The initial sample of completed surveys was 228. The initial round of exclusion criteria included the following: less than 100% completion on the survey, participants who were not in the U.S. (using the geolocator in Qualtrics) at the time of completion, participants who taught at a pre-school or University were also eliminated. After this elimination criteria was applied to the sample there remained a total of 155 participants. The next exclusion criteria was race. Anyone who identified as anything other than non-Hispanic White was eliminated. The total number of included participants that were sourced from Amazon's Mechanical Turk ( $n = 65$ ) were equal to those from the University SONA system ( $n = 65$ ). This resulted in a final sample of 130 participants. The total loss of participants was a number of 98 (42%) of the initial completed surveys.

**Calculation of school diversity data.** As mentioned above, each participant was asked to report the name and location (zip code) of the school in which they taught. School racial diversity data was gathered by using the [greatschools.org](https://greatschools.org) website. This is a public website that is available for parents, teachers, and researchers alike. The information available provides educational summaries, advocacy and parenting information to improve school quality nationwide. Data insights were gathered from this website to gather publicly available diversity

information on each school. This website provided the researcher information on student population and the percent non-White available for 70% of the schools reported.

For the total sample ( $N=130$ ) the schools were grouped into five categories: public, charter, private, refusal, and left blank or unidentifiable. The breakdown of the school data is as follows: 90 (69.2%) were identified public schools (coded as 1), 4 (3.1%) charter schools (coded as 2), 8 (6.2%) private schools (coded as 5) and 25 (19.2%) left blank or the school was unidentifiable (coded as 3), and lastly 3 (2.3%) written refusals to disclose the school at which the participant taught (coded as 4).

There were 25 participants that reported schools for which racial composition data was unavailable on greatschools.org. Data from participants who indicated a school not listed on greatschools.org were not included in analyses that included school diversity as a predictor, but these participants were still included in the sample and were included in all other analyses.

### **Descriptive Analyses**

The purpose of the descriptive analysis was to describe, summarize and make sense of the data. See Table 1 for measure means and standard deviations and Table 2 for correlations among measures.

The intercorrelations among the four CQ dimensions ranged from low to moderate, which is comparable to other results reported in recent studies using CQs (e.g. Ang et. al., 2007; Van Dyne et al, 2008). The mean scores for the CQ subscales ranged from 4.60 ( $SD = 1.13$ ) in Cognitive CQ to 5.42 ( $SD = .92$ ) for Metacognitive CQ on a 7-point scale, indicating that participants had moderately high self-reported Cultural Intelligence. All of these CQ subscales are correlated to each other (see Table 2), therefore, issues of collinearity were examined prior to running regression analyses (see Tables 3 - 6).

The overall mean on the CRTSE measure was 76.81 ( $SD = 15.89$ ) on a 100-point scale, which indicates that teachers feel fairly confident in their ability to use culturally responsive teaching methods.

On the relevant experiences measure, the mean score was 11.16 (out of a maximum possible 22) indicating that participants had a moderate number of culturally relevant experiences over their lifespan. The mode (the most frequent response of relevant experiences on this measure) for this White sample for 14, which is higher than the scale mean. The two next highest modes were 7 and 13 relevant experiences. These two answers were equal in their frequency of responses at 12 participants each. The lowest score on relevant experiences was one.

For the job satisfaction measure, the mean score was 2.43 ( $SD = .63$ ) on a 3-point scale, indicating that participants were highly satisfied with their jobs overall.

**Hypothesis Test 1: Relations between cultural intelligence and culturally responsive teaching self-efficacy.** I hypothesized that all four CQ subscales would be positively related to culturally responsive teaching self-efficacy (CRTSE). Correlational analyses (see Table 2) indicated that all four CQ subscales were significantly positively related to CRTSE.

Looking at how the CQ subscales related to the dependent variable (i.e., CRTSE), the researcher was curious about collinearity before running the regression analysis. All of the relationships between CQ variables are statistically significant. Therefore, it is important that the researcher examines the data for multicollinearity due to their strong positive correlations with each other (see Table 2).

The multicollinearity (VIF) of the subscales were all below 2.1 (see Table 3), which indicates that the variance inflation factors would not cause an issue when analyzing the multiple



regression model. The relationship among all four subscales were low enough not to drop them from the analysis in the present study (See Table 3). Because there was little multicollinearity among the independent variables, the researcher decided to continue.

To further test the hypothesis, a multiple linear regression analysis was conducted with all four CQ subscales as predictor variables and CRTSE as the outcome variable. The overall model was significant  $R^2 = .38$ ,  $F(4, 125) = 19.24$ ,  $p < .001$ . The multiple regression model indicated that the four CQ subscales explained 36% of the variance in Culturally Responsive Teaching Self Efficacy. Motivational and metacognitive CQ were positively and significantly related to CRTSE,  $\beta = .36$ ,  $t(4) = 3.90$ ,  $p < .001$ , and  $\beta = .46$ ,  $t(4) = 4.54$ ,  $p < .001$ , respectively. This indicates that individuals who are more likely to seek out intercultural experiences (motivational CQ), or better plan for intercultural interaction (metacognitive CQ) also feel more efficacious in terms of culturally responsive teaching practices. Given that all of the CQ subscales are correlated to each other, there are a couple that were no longer significant after accounting for the variance in the rest of the linear model. In this case it was cognitive and behavioral CQ that were not significantly related to CRTSE (see Table 3).

### **Hypothesis Test 2: Relations between cultural intelligence and relevant experiences.**

I hypothesized that all four CQ subscales would be positively related to relevant experiences. Correlational analyses indicated that all four CQ subscales were significantly positively related to relevant experiences (see Table 2).

Before further analyses were run, multicollinearity was also explored. The multicollinearity (VIF) of the subscales were all below 2.1 (see Table 4). These VIFs indicate that multicollinearity would not be an issue when running additional analyses, therefore the researcher continued because she felt the variables did not reduce the model's precision.

Thus, to further test the hypothesis, a multiple linear regression analysis was conducted. The overall model was significant,  $R^2 = .21$ ,  $F(4, 125) = 8.44$ ,  $p < .001$ . This model explains 18% of the variance in Relevant Experiences. Motivational and cognitive CQ were positively and significantly related to Relevant Experiences  $\beta = .325$ ,  $t = 3.10$ ,  $p = .002$ , and  $\beta = .27$ ,  $t = 2.44$ ,  $p = .016$ , respectively. Thus, after accounting for the other subscales metacognitive and behavioral CQ were no longer statistically significantly related to Relevant Experiences (see Table 4). This indicates that individuals who are more intrinsically and/or extrinsically motivated to seek out intercultural experiences (motivational CQ) or have more knowledge of norms and practices in other cultures (cognitive CQ) also reported more intercultural experiences (e.g., having studied abroad, having attended a religious service in a religion other than their own).

**Hypothesis Test 3: Relations between cultural intelligence and job satisfaction.** I hypothesized that all four CQ subscales would be positively related to job satisfaction for teachers who teach in schools with high percentages of non-White students, but that CQ would be unrelated to job satisfaction for teachers who teach in predominantly White schools. To test this hypothesis, each school was coded as predominantly White (50% or more of enrolled students identified as White;  $n = 55$  participants) or predominantly non-White (less than 50% of enrolled students identified as White;  $n = 47$  participants). See Table 7 for a comparison of responses of teachers from predominantly White and predominantly non-White schools.

For the first part of the hypothesis the overall model was explored for multicollinearity to begin. Throughout that process all VIFs were below 3.0, therefore it was determined that multicollinearity was not an issue with the Job Satisfaction measure. Provided this information, the researcher continued with the next steps.

Separate multiple linear regression analyses were run for predominantly White and predominantly non-White schools. For teachers in predominantly White schools, the overall model was non-significant,  $R^2 = .167$ ,  $F(4, 51) = 2.51$ ,  $p < .053$  (see Table 5). This model accounts for 10% of the variance in job satisfaction for teachers who teach in predominantly White schools. This was consistent with the hypothesis that CQ would be unrelated to job satisfaction for teachers in predominantly White schools.

For teachers in predominantly non-White schools the overall model was significant,  $R^2 = .362$ ,  $F(4, 43) = 5.97$ ,  $p < .001$ . The model explains 30% of the variance in job satisfaction for teachers who teach in predominantly non-White schools. This was consistent with the hypothesis that CQ would be related to job satisfaction for teachers in predominantly non-White schools. Follow-up analyses indicated that Motivational CQ was significantly and positively related to job satisfaction for teachers in predominantly non-White schools, but that the other CQ subscales were not related to job satisfaction at a statistically significant level (see Table 6). This indicates that for teachers in predominantly non-White schools, teachers who are more intrinsically and/or extrinsically motivated to seek out intercultural experiences (i.e., have higher motivational CQ) also have higher job satisfaction.

## CHAPTER V: DISCUSSION

### Introduction

The discussion chapter is divided into four sections. The first section provides a summary of the findings in the study. In the next section, the implications of the study will be explored. In the third section, limitations will be addressed. The final section will explore future directions for research. Overall, results of the study indicated that CQ is a potentially useful framework for examining cultural competence among educators, with ties to both prior experiences and self-efficacy for relevant teaching practices.

### Cultural Intelligence in Teachers

The goals of the study were to examine White teachers' Cultural Intelligence (CQ) in relation to culturally responsive teaching self-efficacy, relevant experiences, and job satisfaction. Students of color now outnumber White students in U.S. public schools (Krogstad & Fry, 2014). Thus, cultural intelligence and culturally responsive teaching are increasingly important.

Cultural Intelligence is a relatively new construct in the research literature and has not been popularized in research with teachers. The Cultural Intelligence framework includes four elements: Motivational, Cognitive, Metacognitive, and Behavioral. The theoretical foundation in CQ allows for strong empirical work. CQ differs from many other cultural competence measures because it is based on a theoretical foundation of the multiple loci of intelligence from Sternberg & Detterman (1986).

Later, Earley and Ang (2003) created four different dimensions of the cultural intelligence scale. The published, peer-reviewed validity evidence behind CQ is highly rigorous and the measure is stable in its factor structure (Ang et al., 2007). This speaks highly of its psychometric characteristics. Because of this evidence, the Cultural Intelligence scale's

reliability provides empirical evidence for my reasoning to use it in this study. Many other measures do not meet these qualifications. CQ has incremental validity and predictive validity for non-self report outcomes which predicts performance (evaluated objectively), predicts supervisor performance (when the situation involves cultural diversity), it also predicts creativity, collaboration, trust, cultural judgement and decision-making, negotiation effectiveness, and leadership effectiveness (Ang et al., 2007; Lee, 2011).

Motivational CQ is drive to learn about and engage with other cultures, including intrinsic and extrinsic motivation (Van Dyne, Ang & Koh, 2008). A person high in motivational CQ might report that they enjoy reading books or watching films set in other cultures (intrinsic motivation) or might recognize that the ability to work with others from a variety of backgrounds could be a competitive advantage in the job market (extrinsic motivation). Teachers high in motivational CQ would be highly motivated to learn about other cultures and see how that knowledge could be relevant in their own classrooms. A teacher high in motivational CQ might opt to attend professional development sessions on cultural competence or working with English Language Learners.

Cognitive CQ is knowing about cultures in both general and context-specific ways (Van Dyne et al., 2008). A person of high cognitive CQ might report knowing the role expectations for men and women in India, Pakistan, and Mexico. This person may also be multilingual or be an interpreter. Cognitive CQ is the type of skills and knowledge on a macro level that would make you feel confident when going into a culturally diverse situation. Teachers high in cognitive CQ would be very interested in cultural value frameworks that explain different parts of the world or be able to describe leadership styles amongst differing nations. A teacher may also be able to

teach other students to provide some negotiation tips on encountering those from another cultural background.

Metacognitive CQ is your level of awareness of cultures and ability to strategize cross-culturally (Van Dyne et al., 2008). Teachers that dissect cultural distinctions and think about how their cultural encounters are different and need to be carefully examined. For example, a teacher who understands that the cultural norm in India is a top down structure, and in Scandinavia there is a flat egalitarian approach will fare far better developing an action plan for a students' parents for parent-teacher conferences, or if their plan accidentally offends a guardian during their encounter, that teacher will update and shift his or her understanding of that culture. This ability to really slow down and attune one's thoughts and another's responses is key in metacognitive CQ.

Behavioral CQ is the ability to act appropriately in a variety of cultural settings (Van Dyne et al., 2008). This includes the ability to change your verbal and non-verbal actions appropriately when interacting cross-culturally and to know when to adapt to someone's culture and when not to. A teacher with high behavioral CQ can tailor their behaviors in a flexible manner in order to make that student from another culture comfortable. A teacher who is high in behavioral CQ has learned and practiced that certain expressive speech acts will not be as effective for certain cultures (e.g., offering feedback directly or indirectly or knowing how to appropriately make a request) (Livermore, 2015).

While the demands of meeting every students' cultural needs in the classroom make it seem impossible to master all of the do's and don'ts of various cultures, there are certain behaviors that should be customized when we interact with different cultures. For example, Westerners should understand that verbal tone (e.g., loud versus soft) can suggest different

meanings across cultures. It may not be realistic that one will learn how to give a proper Japanese bow, but appropriate use of touch *is* something vitally important, culturally (Livermore, 2015).

Every district, every school, and every classroom have a different culture. Every region of the United States has a different culture. The real key to CQ is not about knowing about every culture. It is cueing these insights as change agents, each teacher asking: “How do I use culture effectively in my classroom?” Leading a classroom with a variety of international cultures can seem difficult, but it does not have to be. Although many believe that IQ is fixed, CQ is not. CQ is not something you are born with; it is malleable. CQ helps educators grow. Teasing apart cultural intelligence in classrooms by talking about cultures should not be about ‘giving up’ cultures or values, it should be about growing, stretching, and looking at this information in a way that White American teachers can expand as educators.

Studying cultural intelligence can be difficult when bombarded with many other similar constructs. Other researchers using similar language in their articles describing the idea of cultural interaction as, “intercultural sensitivity” (Green; Hammer, Bennett, & Wiseman, 2003; Hawes & Kealey 1981), “cultural flexibility” (Arthur & Bennett, 1995), “cultural empathy” (Hannigan, 1990), “bicultural competence” (LaFromboise, Coleman & Gerton, 1993), “extra cultural openness” (Arthur & Bennet, 1995), “global mindset” (Gupta & Govindarajan, 2002), “cross-cultural competence” (Barrera & Corso, 2003; Hampden-Turner & Trompenaars, 2000; Lynch & Hanson, 1993, 2004; Magala, 2005), “cultural competence” (Mcphatter, 1997; Pinderhughes, 1995), “cross-cultural effectiveness” (Lynch & Hansen, 2004), “cultural awareness” (Green, 1999), “intercultural maturity” (King & Baxter Magolda, 2005), and “cultural intelligence” (Ang & Van Dyne, 2008; Earley & Ang, 2003). This is not a new

construct to study. Here is a list of over twelve, which is not extensive. This idea investigating the way people interact with people from different cultural backgrounds is not a new phenomenon.

**Is this really intelligence?** A commentary on methodological differences in Intelligence and Cultural Intelligence in this study and previous research seem necessary. Intelligence refers to intellectual functioning, intellectual quotient, or IQ tests—which reveal one’s performance in comparison to other people. However, these IQ tests do not measure all areas of intelligence. Sternberg (2015) suggests that IQ tests assess a very small sampling of the abilities required for success in a school setting and in life. Sternberg (2015) presents an alternative way to look at intelligence by including creativity (e.g., production of ideas or conflict resolution), analytic skills (e.g., in evaluating whether the ideas are good ones), practical skills (e.g., application of ideas, convincing other people of ideas), and wisdom skills (e.g., use of knowledge and skills to help the common good). This new way of looking at intelligence was studied and explored in various projects (e.g. Kaleidoscope Project, Panorama Project, Rainbow Project) where the augmented theory was applied (Sternberg, 2015). Some scholars, however, have critiqued Sternberg’s theory as overly broad in its conceptualization of intelligence (e.g., Gottfredson, 2003).

This researcher believes in similar principles as Sternberg. There are many factors that may contribute to the success of teaching. Some factors that this study examines are one’s motivation to learn about cultures, the use of language during cultural interactions, planning before cultural encounters, and behavior change or reflection. IQ only measures certain pieces of success, while ignoring other components of success (e.g., social interaction). In an effort to look at teachers in a new way, this study opens the discussion among scholars and researchers to



explore a deeper, further analysis of teachers. Looking beyond an IQ score and looking at their exposure and experiences which made them the people that they are today—as educators. How can education build on that idea? It is not an IQ test; it is a CQ test. Other scholars have seen that students who have studied abroad were challenged to adapt their language to integrate experiences that contained foreign beliefs (Cognitive CQ), attitudes (Motivational CQ), and behaviors (Behavioral CQ) (Lee, 2011). All of these skills may play an equal role in contributing to “success” in the various settings (e.g., education, corporate, and political).

### **Cultural Intelligence and Culturally Responsive Teaching Self-Efficacy**

As reviewed in the literature, culturally responsive teaching self-efficacy (CRTSE) is a self-report measure developed by Siwatu (2007) to gain a more comprehensive understanding of teachers and their ability to teach culturally relevant curriculum. This is a measure tapping into classroom practices, unlike the CQ measure which is generally about adaptation before, during and after cultural interactions. The CQ attempts to measure a glimpse of what needs to be addressed in cultural settings and where to go from there. Although CQ subscales are tapping into different, but equally important skills than CRTSE, the present study highlights the positive relations among these variables (See Table 2 for correlations). The relationship between CRTSE and CQ may have to do with the way that these measures address different aspects of cultural competence. Based on previous research culturally responsive practices help students discuss cultural backgrounds with each other outside [and inside] the classroom in order to learn from each other (Lee, 2002).

### **Summary of the Findings**

**Cultural intelligence.** All four CQ subscales were significantly and positively related to one another (see Table 2), suggesting that these constructs are related. It is unsurprising that

these measures would be correlated. For example, teachers higher in motivational CQ might be more likely to seek out travel experiences or other opportunities to learn about different cultures and thus gain cognitive CQ. However, the multicollinearity analyses indicated that the four CQ subscales were not so strongly related that they could not all be included as predictors in a single analysis.

**Culturally responsive teaching self efficacy.** What are the contributing factors that allow White American teachers to successfully teach students of color? By the looking at the mean culturally responsive teaching self-efficacy score ( $M = 76.81$ ,  $SD = 15.89$ ), teachers feel that they can meet the needs of their students—but, what skills or knowledge are supporting these classroom efforts?

**Cultural intelligence and culturally responsive teaching self efficacy.** The results from the study also show that when all CQ subscales were included in the model, Motivational and Metacognitive CQ are significant and positively associated with CRTSE. It was unexpected to see the results of the study also indicate that the other subscales in the model (e.g. cognitive CQ and behavioral CQ) were no longer statistically significant after accounting for Metacognitive CQ and Motivational CQ (see Table 3).

A possible reason for the why behavioral CQ and cognitive CQ were not significantly related to culturally responsive teaching self-efficacy could be that instructional confidence level in teaching students from different cultural backgrounds does not always equate to general knowledge (i.e., cognitive CQ) about a culture (e.g. languages spoken, gender roles) or to mastery in use of speech or non-verbal behaviors with students from a different culture (i.e., behavioral CQ). Additionally, the cognitive CQ measure may only assess for general knowledge which may not be specific enough to relate to the classroom-based knowledge and behaviors

measured by CRTSE. This result may highlight how the salad bowl approach to cultures is not serving the needs of non-White students, but also, more importantly, might not be serving White teachers either.

Another possibility for why Cognitive CQ and Behavioral CQ were not significantly related to CRTSE after accounting for the other subscales (i.e. Motivational CQ and Metacognitive CQ) could be because a teacher's self-efficacy does not always equate to teaching students from a different culture (e.g., a good teacher can teach any student from any background). Some of the remaining reasons for this could include that a teacher with high culturally responsive teaching self-efficacy score and high metacognitive CQ would understand the significance and subtlety between their self-awareness and their awareness of the students' culture. More specifically, a teacher may possess enough understanding of when their students express accepting (classroom engagement) or disapproving non-verbal behavior (inattention) but may not understand how their students' non-verbal cues relate to their students' culture and background due to a lack of understanding, and therefore, should modify their teaching approach.

**Cultural intelligence and relevant experiences.** The second hypothesis stated that all four CQ subscales would be positively related to relevant experiences. Correlational analyses (see Table 2) supported this hypothesis. Regression analyses indicated that, after accounting for all four CQ subscales, relevant experiences were significantly and positively related to Motivational CQ and Cognitive CQ. In this model, metacognitive CQ and behavioral CQ were no longer statistically associated with relevant experiences after accounting for the other variables in the model.

Some reasons explaining these findings follow. Motivational CQ can be driven by a multitude of factors, a few of which include developmental, environmental and social exposure to other cultures. It is yet to be understood whether culturally relevant experiences promote motivational CQ or whether teachers who are more motivated (i.e., have high motivational CQ) are more likely to seek culturally relevant experiences. Perhaps, they are bidirectional (e.g., the higher the relevant exposure or experiences the more cognitive CQ teachers may have). The more exposure you get the more knowledge you gain which can result in higher cognitive CQ. Some of the items within the measure have little voice in the area of research, but my hope is that by exposing these relevant experiences, researchers will continue to look more deeply into their relationship with cultural awareness.

A possible reason why metacognitive CQ was not statistically significant is the fact that a teacher's relevant experience may not be aligned with their students' cultural background. Therefore, teachers may be blind to other cultural nuances. For example, if a teacher has studied German (cognitive CQ) and traveled to Germany that is culturally relevant experience, which may help in understanding cultural interactions with other German families, but it maybe doesn't help you very much when creating a conflict resolution plan for your student from Myanmar who speaks Burmese as a first language (metacognitive CQ).

Another reason why behavioral CQ was not significant could be that teacher exposure to other cultures is minimal while living in the United States. Teachers may not have responded high on the subscale of behavioral CQ because they are possibly blinded by American living. Verbal customs are not discussed frequently in the U.S. because they are not fully immersed in those cultures throughout the entire day, and therefore don't take into account that Japanese students do not like to be pointed at, or the use of the number four has an association with death

in Japanese culture (Bosrock, 2007). Put more simply, teachers have students from many different cultures, perhaps they do not know how to greet each student in all of their foreign languages or know how to show their common courtesies because there are so many. As a result, they may adopt the perspective that everyone in this room is from a unique, different culture, so we will not highlight any of them or put more emphasis on one over another.

**Cultural intelligence and job satisfaction.** The third hypotheses states that all four CQ subscales would be positively related to job satisfaction for teachers who teach in schools with high percentages of non-White students, but that CQ would be unrelated to job satisfaction for teachers who teach in predominantly White schools.

Results of the regression analyses indicated that CQ was related to job satisfaction for Teachers who teach in predominantly non-White schools but that CQ was not significantly related to job satisfaction for teachers in predominantly White schools. However, because of the small sample sizes for these analyses, the findings should be interpreted with caution.

Some reasons why CQ was unrelated to job satisfaction for teachers working with predominantly White students could be that teachers were potentially raised in or exposed to a similar culture as their students; therefore, relating to their students of a similar culture is not as difficult and inter-cultural competence is less needed in day-to-day interactions. Given the potential that White teachers were raised in a similar culture as their White students, the teachers may have better understood the colloquialisms and mannerisms of their students than their peers did in a non-White classroom. Thus, making it easier for them to relate to their students and reducing the need for cultural intelligence.

For White teachers in predominately non-White schools, it is important for them to understand all aspects of CQ in order to successfully relate their teaching material to their

students. Their job could be more challenging for White teachers because it requires more effort from the teacher as they are potentially less familiar with the culture of their students. Perhaps they have been exposed to relevant experiences throughout their life, but that skillset does not help in navigating or teaching all non-White students with different cultural backgrounds. After White teachers put in the effort and grow in their curriculum development and they are successful in their efforts, or at least, see some sort of reward—it would make sense for them to feel greater job satisfaction as a result. Their ability to convey lessons to their students is important for their students' success and/or potentially for their own job satisfaction. This would also explain why Motivational CQ was significantly and positively related to job satisfaction for teachers in predominantly non-White schools.

### **Implications**

The findings in this quantitative research study are rooted in cultural intelligence and culturally responsive teaching frameworks. This is the first study to explore cultural intelligence and job satisfaction, relevant experiences, and cultural relevant teacher self-efficacy in a sample of K-12 teachers. The following section delves into the potential contributions of this study for theory and practice.

This study suggests that the cultural intelligence framework, which has been primarily used to explore intercultural competency in business settings, may have application for educational settings as well. The CQ scales demonstrated adequate reliability and related to a measure of professional performance (i.e., culturally responsive teaching self-efficacy). The results suggest that certain aspects of CQ may relate to different aspects of teacher attitudes or performance. Motivational CQ was the strongest predictor of the outcome variables in this study, with relations to culturally responsive teaching self-efficacy, relevant experiences, and job

satisfaction (for teachers in predominantly non-White schools) after accounting for other aspects of CQ. After accounting for other CQ subscales, cognitive CQ was related only to relevant experiences, and metacognitive CQ was only related to culturally responsive teaching self-efficacy.

In practice, the more awareness a teacher has about where their CQ stands, the more a teacher can understand how to grow to meet the needs of her non-White students. Professional Development (PD) sessions can also aid in the further development of cultural intelligence. For example, hosting seminars or Q&A sessions with native speakers who explain their comfortability with personal space, show of gratitude and use of tone could help increase behavioral CQ. Whereas building on metacognitive CQ the professional development might build discussions based around self-reflection on cultural encounters, level of awareness and updating one's cultural understanding after an encounter. For cognitive CQ, building wide initiatives are useful. For example, broadening one's understanding of culture by hanging posters showing cultural differences created by their teachers (e.g. "Did you know there are different roles and expectations in India than in the U.S.?" ) Other posters might explore leadership systems, and negotiations. For Motivational CQ, a PD idea would be to build exposure through cuisine. Having a staff pot luck and only allowing for "native" authentic ingredients to be used for the recipes. Then, reflection about having to go to new stores they didn't normally go to. Was it motivating or irritating? Were they inspired or depleted after their visit? Checking in with those emotions after might be a good indicator about where some teachers are on the motivational scale.

An aspect of teachers' job satisfaction is connection to their students and their individualized success. An important component of learning and motivation relates to

instructional material and their students. Students learn when they feel connected to the material, to their peers, and to their classroom environment. Based on these results teachers can continue to grow their CQ to benefit many areas of teaching. For example, teaching with a high CQ helps cultural judgement in classroom conflict resolution, cultural adaptation in pedagogy, and predicted task performance in curriculum development (Ang., et al., 2007). Looking at these results from this study, it would be wise for teacher educators to gain some exposure to cultural intelligence before they engage with their classrooms. Doing so could make tailoring curriculum in a culturally responsive way much easier.

### **Limitations**

**Sampling and data collection.** There are several limitations to this study, most of which are limitations that could be prevented in the future, related to sampling and online data collection. Teachers are a sufficiently large group of interest. Therefore, using Amazon's Mechanical Turk and the University of Kansas' online data collection system SONA, the researcher assumed data collection would be quick. Amazon's Mechanical Turk system limited data collection to only those in that system—which might not be representative of the teaching population. However, it was an effort to collect data on a national level. At first, data collection through Mechanical Turk went quickly, however with further investigation of geolocations while participants were filling out the survey, many were then disqualified. For future researchers trying to gather data on a national level it would be recommended to partner with local schools, universities, or national education associations. By creating another stream of data collection through the University system, the researcher was able to gather more participants, but the sample size after exclusion remained relatively small ( $N = 130$ ). Although a small sample, the researcher was pleased with the national level of data.



**Researcher perspective.** Another possible limitation is the researcher herself. The researcher is a cisgender, female, Peruvian-American professional counselor in Kansas. Different people looking at the same results may attach very different interpretations to them depending on their values, past experiences, and personal expectations. This researcher's background is not in education, but in psychology which could be viewed as a limitation. Having worked as a bilingual professional counselor in a school setting for 6 years, I grew an affinity for teachers and their daily struggles. Although my lack of background is not in education specifically, my doctoral work in educational psychology has allowed for fresh insights into the data and issues in the education field. Yet, for this reason, the results were discussed with my advisor and committee members to ensure avoidance of common misinterpretations of statistical findings.

**Cultural intelligence framework.** Another limitation of this study includes measurement. Within the fields of business, medicine, and education there are many measurement tools being used to capture an understanding of cultural competence. With so many unlike measures comparing results is challenging. The results of the current study suggest that CQ may be a useful measure for assessing cultural competence for teachers, but additional research is needed to support this conclusion. But gaps in research are not limiting at all, they are opportunities for further investigation.

The expansion of the Cultural Intelligence framework, a concept created with the intention of use across many domains including business and athletics, to the field of education may create a pause for some researchers and practitioners. The name alone cultural "intelligence" presents some strong implications and associations with IQ. This stigma surrounding this terminology creates resistance in some scholars to use the name "cultural intelligence." Although CQ, is presented as the ability to connect with people across cultures, it

still creates some hesitancy from the general public and scholars alike because of the word “intelligence.”

Another limitation relates to the concept of cultural competence in general. Some experts in the field (both researchers and practitioners) have argued that there are problems with the cultural competence framework. Criticisms include that thinking about teachers and teacher training through the lens of cultural competence promotes a check-box approach in which teachers expect to learn specific strategies for working with students from different groups, rather than reflecting on their own experiences and biases with regard to culture. This framework continues to separate cultural differences, rather than bring them together in a classroom environment.

### **Future Directions**

Cultural intelligence and culturally responsive teaching practice are both complex and comprehensive. Some future directions based on the findings from this study would include further assessment of culturally relevant experiences and CQ. Which culturally relevant experiences are more culturally enhancing than others? What activities could help pre-service teachers gain more CQ to help them most when they reach their classrooms?

Building on the current study’s work on school diversity, future research could include additional data gathering about community level diversity and drawing some conclusions about the variations in CQ and relevant experiences. The researcher would have liked to explore English Language Learner levels in each of the schools, however there was not enough data to support this inquiry. School diversity data could also be explored further in CQ scores across regions. Providing this sort of exploration of data, would allow different school districts to

possibly further pinpoint where additional cultural training may or may not be necessary to meet the needs of their students.

An additional area for further research is based in another research question. This question, “What is the relationship between a teacher’s CQ and their students’ engagement in a school setting?” A study with observing teachers’ classroom practices over time would be a thought-provoking next step. Providing teachers with CQ training would also be an interesting means of conducting research on CQ.

Allowing for student reports of CQ perceptions of their teachers would be an interesting alternative teaching and learning method. Also, teachers, at the front of the classroom, might increase their receptiveness to feedback and guidance if it comes from their students directly or by a third party later in a presentation format.

Adding a mixed methodology study to the literature on cultural intelligence would open new avenues of discovery. One of these might include other attributional dispositions of teacher behavior. Digging deeper into the complexity of the specific barriers that avert a teacher from changing curriculum or resolving conflict would give a voice to many quantitative studies on cultural intelligence. Qualitative research would allow for social betterment and the opportunity for further accuracy in the development of cultural toolkits, district-wide initiatives, and standards for conflict resolution.

## **Conclusions**

Within a classroom, interpretation of a students’ non-verbal cues or subtext beneath their words are an expectation of teachers. Having intuition and emotional intelligence allows for teachers to remain connected to their students. This, to many, seems effortless. However, CQ allows for teachers to continue to do this where intuition and emotional intelligence leave off.

Teachers need to have higher standards for themselves, not just their students. Teachers need not know every check-box for every culture but have a sense of practical sensibility when interacting with a culture that is different from their own (Livermore, 2015). Culture allows for refinement in interaction and learning, but most importantly in motivation. White teachers can enhance their cultural intelligence which relate to a more successful repertoire of culturally responsive teaching practices.

## REFERENCES

- Allard, A., & Santoro, N. (2004, January). Making sense of difference? Teaching identities in postmodern contexts. In *AARE 2004: Doing the public good: positioning educational research; AARE 2004 International Education Research conference proceedings* (pp. 1-20). Australian Association for Research in Education.
- Allport, G. W. (1954). *The Nature of Prejudice*. Reading, MA: Addison-Wesley.
- Alvidrez, J., & Weinstein, R. S. (1999). Early teacher perceptions and later student academic achievement. *Journal of educational psychology*, 91(4), 731.
- Ang, S., Van Dyne, L., & Koh, S.K. 2006. Personality correlates of the four-factor model of cultural intelligence. *Group and Organization Management*, 31: 100-123.
- Ang, S., Van Dyne, L., Koh, C., Ng, K. Y., Templer, K. J., Tay, C., & Chandrasekar, N. A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Management and organization review*, 3(3), 335-371.
- Ang, S., Van Dyne, L., & Tan, M. L. (2008). Cultural intelligence. *The Cambridge*.
- Ang, S., & Van Dyne, L. (2015). Conceptualization of cultural intelligence: Definition, distinctiveness, and nomological network. In *Handbook of cultural intelligence* (pp. 21-33). Routledge.
- Arredondo, P., Gallardo-Cooper, M., Delgado-Romero, E. A., & Zapata, A. L. (2014). *Culturally responsive counseling with Latinas/os*. John Wiley & Sons.
- Arthur, W., & Bennett, W. (1995). The international assignee: The relative importance of factors perceived to contribute to success. *Personnel Psychology*, 48, 99-111.

- Baker, C. N., Tichovolsky, M. H., Kupersmidt, J. B., Voegler-Lee, M. E., & Arnold, D. H. (2015). Teacher (mis) perceptions of preschoolers' academic skills: Predictors and associations with longitudinal outcomes. *Journal of educational psychology, 107*(3), 805.
- Baker, E. L., Barton, P.E., Darling-Hammond, L., Haertel, E., Ladd, H. F., Linn, R. L., Ravitch, D., Rothstein, R., Shavelson, R. J., & Shepard, L. A., (2010) Problems with the use of test scores to evaluate teachers. Economic Policy Institute.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.
- Banks, J. A. (2001). Citizenship education and diversity: Implications for teacher education. *Journal of teacher education, 52*(1), 5-16.
- Barbuto Jr, J. E., Beenen, G., & Tran, H. (2015). The role of core self-evaluation, ethnocentrism, and cultural intelligence in study abroad success. *The International Journal of Management Education, 13*(3), 268-277.
- Barrera, I., Corso, R., & Macpherson, D. (2003). *Skilled dialogue: Strategies for responding to cultural diversity in early childhood*. Baltimore, MD: Paul Brookes.
- Bonilla-Silva, E. (2010). Racism without racists: Color-blind racism & racial inequality in contemporary American. *Maryland: Rowan & Littlefield*.
- Bosrock, M. M. (2007) Asian business customs & manners: A country-by-country guide. Minnetonka, MN: Meadowbrook Press
- Brisk, M. E., & Harrington, M. M. (2010). *Literacy and bilingualism: A handbook for all teachers*. Routledge.
- Bruner, J.S. (1957). On perceptual readiness. *Psychological Review, 64*, 123-152.

- Carlson, J. S., & Widaman, K. F. (1988). The effects of study abroad during college on attitudes toward other cultures. *International Journal of Intercultural Relations*, 12 (1), 1-18.
- Carter, P. L. (2005). *Keepin' it real: School Success beyond Black and White*. New York, NY: Oxford University Press.
- Causey, V. E., Thomas, C. D., & Armento, B. J. (2000). Cultural diversity is basically a foreign term to me: The challenges of diversity for preservice teacher education. *Teaching and teacher education*, 16(1), 33-45.
- Chao, M. M., Takeuchi, R., & Farh, J. L. (2017). Enhancing cultural intelligence: The roles of implicit culture beliefs and adjustment. *Personnel Psychology*, 70(1), 257-292.
- Chen, G., Kirkman, B. L., Kim, K., Farh, C. I., & Tangirala, S. (2010). When does cross-cultural motivation enhance expatriate effectiveness? A multilevel investigation of the moderating roles of subsidiary support and cultural distance. *Academy of Management Journal*, 53(5), 1110-1130.
- Conchas, G. Q. (2001). Structuring failure and success: Understanding the variability in latino school engagement. *Harvard Educational Review*, 71(3), 475-504.
- Conchas, G. Q. (2006). *The color of success: Race and high-achieving urban youth*. Teachers College Press.
- Cushner, K., & Karim, A. U. (2004). Study abroad at the university level. In D. Landis, J. Bennet, & M. J. Bennet (Eds.), *Handbook of Intercultural Training*, California: Sage Publications Inc.
- Daniels, H. (2002). *Literature circles: Voice and choice in book clubs and reading groups*. Stenhouse Publishers.

- Darling-Hammond, L. (1997). *The Right To Learn: A Blueprint for Creating Schools That Work*. *The Jossey-Bass Education Series*. Jossey-Bass, Inc., Publishers, 350 Sansome Street, San Francisco, CA 94104.
- Earley, P. C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Stanford University Press.
- Eisenberg, J., Lee, H., Bruck, F., Brenner, B., Claes, M., Mironski, J., & Bell, R. (2013) *Can Business Schools Make Students Culturally Competent? Effects of Cross-Cultural Management Courses on Cultural Intelligence*. *The Academy of Management Learning and Education*, 12.
- Fairchild, S., & Noguera, P., (2009). Determinants of White, Non-Hispanic and Black, Non-Hispanic Urban School Teachers' Job Satisfaction: Does Relational Demography Matter?
- Falicov, C. J. (2014). Psychotherapy and supervision as cultural encounters: The MECA framework. *Multiculturalism and diversity in clinical supervision: A competency-based approach*. Washington, DC: American Psychological Association.
- Feiman-Nemser, S. (1983). Learning to teach. In L. Shulman & G. Sykes (Eds), *Handbook of teaching and policy* (pp. 150-170). New York: Longman.
- Fichett, G., Starker, T., & Salyers, B. (2012) Examining Culturally Responsive Teaching Self-Efficacy in a Preservice Social Studies Education Course.
- Fine, M. (1991). *Framing dropouts: Notes on the politics of an urban high school*. SUNY Press.
- Flores-González, N. (1999). Puerto Rican high achievers: An example of ethnic and academic identity compatibility. *Anthropology & Education Quarterly*, 30(3), 343-362.
- Frankenburg, R. (1993). *White women, race matters: The social construction of whiteness*. Routledge.



- Gay, G. (1993). Building cultural bridges. *Education and Urban Society*, 25(3), 285-299.
- Gay, G. (2000). *Culturally Responsive Teaching: Theory, Research, and Practice*. Teachers College Press.
- Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of teacher education*, 53(2), 106-116.
- Gay, G. (2007). Teaching children of catastrophe. *Multicultural Education*, 15(2), 55.
- Gay, G. (2010). *Culturally responsive teaching: Theory, research, and practice*. Teachers College Press.
- Gay, G., & Howard, T. C. (2000). Multicultural teacher education for the 21<sup>st</sup> century. *The Teacher Educator*, 36 (1), 1-16.
- Gershenson, S., Holt, S. B., & Papageorge, N. W. (2016). Who believes in me? The effect of student–teacher demographic match on teacher expectations. *Economics of Education Review*, 52, 209-224.
- Gershenson, S., Hart, C., Lindsay, C., & Papageorge, N. W. (2017). The long-run impacts of same-race teachers.
- Green, J. W. (1999). *Cultural awareness in the human services: A multi-ethnic approach*. Boston, MA: Allyn & Bacon.
- Gregersen, H. B., Morrison, A. J., & Black, J. S. (1998). Developing leaders for the global frontier. *Sloan management review*, 40(1), 21.
- Gregory, A., Skiba, R. J., & Noguera, P. A. (2010). The achievement gap and the discipline gap: Two sides of the same coin? *Educational Researcher*, 39(1), 59-68.
- Gottfredson, L. S. (2003). Dissecting practical intelligence theory: Its claims and evidence. *Intelligence*, 31, 343-397.

- Hammer, M. R., Bennett, M. J., & Wiseman, R. (2003). Measuring intercultural sensitivity: The intercultural development inventory. *International journal of intercultural relations*, 27(4), 421-443.
- Hampden-Turner, C. M., & Trompenaars, F. (2000). *Building cross-cultural competence: How to create wealth from conflicting values*. New Haven, CT: Yale University Press.
- Hannigan, T. P. (1990). Traits, attitudes, and skills that are related to intercultural effectiveness and their implications for cross-cultural training: A review of the literature. *International Journal of Intercultural Relations*, 4, 239-258.
- Healy & Kealy (1981)
- Hinnant, J. B., O'brien, M., & Ghazarian, S. R. (2009). The longitudinal relations of teacher expectations to achievement in the early school years. *Journal of educational psychology*, 101(3), 662.
- Hollins, E. R. (1996). *Culture in school learning: Revealing the deep meaning*. Mah-wah, NJ:Lawrence Erlbaum Associates.
- Hofstede, G. (1991). *Cultures and organizations: Software of the mind*. London: McGraw-Hill.
- Jennings, L. B. (2002). Examining the role of critical inquiry for transformative practices: Two joint case studies of multicultural teacher education. *Teachers College Record*, 104(3), 456-481.
- Johnson, L. (2002). "My eyes have been opened" White teachers and racial awareness. *Journal of Teacher Education*, 53(2), 153-167.
- Johnson, J. P., Lenartowicz, T., & Apud, S. (2006). Cross-cultural competence in international business: Toward a definition and a model. *Journal of international business studies*, 37(4), 525-543.

- Jussim, L., Eccles, J., & Madon, S. (1996). Social perception, social stereotypes, and teacher expectations: Accuracy and the quest for the powerful self-fulfilling prophecy. In *Advances in experimental social psychology*, 28, 281-388. Academic Press.
- King, P. M., & Baxter Magolda, M. B. (2005). A developmental model of intercultural maturity. *Journal of College Student Development*, 46 (6), 571-592.
- Kozlowski, K. P. (2015). Culture or teacher bias? Racial and ethnic variation in student–teacher effort assessment match/mismatch. *Race and Social Problems*, 7 (1), 43-59.
- Krogstad, J. M., & Fry, R. (2014). Department of Education Projects public schools will be majority-minority this fall. Pew Research Center. Retrieved from <http://www.pewresearch.org/fact-tank/2014/08/18/u-s-public-schools-expected-to-be-majority-minority-starting-this-fall/>
- Ladson-Billings, G. (1994). Toward a theory of culturally relevant pedagogy. *American Education Research Journal*, 32, 465-491.
- Ladson-Billings, G. (1995). But that’s just good teaching! The case for culturally relevant pedagogy. *Theory into Practice*, 34(3), 159-165.
- Ladson-Billings, G. (2007). Cultural responsive teaching: Theory and practice. In J.A. Banks & C.A.M Banks (Eds.), *Multicultural education: Issues and perspectives* (6<sup>th</sup> ed.) 221-245. Hoboken, NJ: John Wiley & Sons.
- Ladson-Billings, G. (2009). *The dreamkeepers: Successful teachers of African American children*. San Francisco, CA: Jossey-Bass.
- LaFromboise, T., Coleman, H. L., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin*, 114, 395-412.

- Langley, C. S., & Breese, J. R. (2005). Interacting sojourners: A study of students studying abroad. *The Social Science Journal* (42), 313-321.
- Lawrence, S. M., & Tatum, B. D. (1997). Teachers in Transition: The Impact of Antiracist Professional Development on Classroom Practice. *Teachers College Record*, 99(1), 162-78.
- Lee, J. (2002). Racial and ethnic achievement gap trends: Reversing the progress toward equity? *Educational Researcher*, 31(1), 3-12.
- Lee, C. S., Therriault, D. J., & Linderholm. (2012). On Cognitive Benefits of Cultural Experience: Exploring the Relationship between Studying Abroad and Creative Thinking, *Applied Cognitive Science, Applied Cognitive Psychology*, 26, 786-778.
- Lensmire, T., McManimon, S., Tierney, J. D., Lee-Nichols, M., Casey, Z., Lensmire, A., & Davis, B. (2013). McIntosh as synecdoche: How teacher education's focus on white privilege undermines antiracism. *Harvard Educational Review*, 83(3), 410-431.
- Leung, K., Ang, S., & Tan, M. L. (2014). Intercultural competence. *Annual Review Organizational Psychology Organizational Behavior*, 1(1), 489-519.
- Livemore, D., & Ang, Soon, author of introduction, etc. (2015). *Leading with cultural intelligence: The real secret to success* (Second ed.).
- Loewus, L. (2017). The nation's teaching force is still mostly White and female. Education Week. Retrieved from <https://www.edweek.org/ew/articles/2017/08/15/the-nations-teaching-force-is-still-mostly.html>
- Lynch, E. W., & Hanson, M. J. (1993). Changing demographics: Implications for training in early intervention. *Infants and Young Children*, 6(1), 50-55.
- Magala, S. (2005). *Cross-cultural competence*. New York, NY: Routledge.

- Matsumoto, D., & Hwang, H. C. (2013). Assessing cross-cultural competence: A review of available tests. *Journal of cross-cultural psychology*, 44(6), 849-873.
- Magnusson, P., Westjohn, S. A., Semenov, A. V., Randrianasolo, A. A., & Zdravkovic, S. (2013). The role of cultural intelligence in marketing adaptation and export performance. *Journal of Marketing Research*, 21(4), 44-61.
- McCabe, L. T. (1994). The development of global perspective during participation in semester at sea: A comparative global education program. *Educational Review*, 46 (3), 275-286.
- McCabe, L. T. (2001). Globalization and internationalization: The impact on education abroad programs. *Journal of Studies in International Education*, 5, 138-145.
- McDonald, M. A. (2005). The integration of social justice in teacher education: Dimensions of prospective teachers' opportunities to learn. *Journal of Teacher Education*, 56(5), 418-435.
- McLaren, P. (1995). Chapter III: White Terror and Oppositional Agency: Towards a Critical Multiculturalism. *Counterpoints*, 4, 87-124.
- McPhatter, A. R. (1997). Cultural competence in child welfare: What is it? How do we achieve it? What happens without it? *Child Welfare*, 50, 85-106.
- Mills, C. (2008). "I don't have much of an ethnic background" Exploring Changes in Dispositions towards Diversity in Preservice Teachers. *International Journal of Pedagogies and Learning*, 4(3), 49-58.
- Milner, H. R. (2007). Race, culture, and researcher positionality: Working through dangers seen, unseen, and unforeseen. *Educational Researcher*, 36, 388-400.

- Milner, H. R. (2010). *Start where you are, but don't stay there: Understanding diversity, opportunity gaps, and teaching in today's classrooms*. Cambridge, MA: Harvard Education Press.
- Milner, H. R. (2011). Culturally relevant pedagogy in a diverse urban classroom. *Urban Review*, 43 (1), 66-89.
- Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory Into Practice*, 31(2), 132-141.
- Molina, S. C. (2013). Romanticizing Culture: The Role of Teachers' Cultural Intelligence in Working with Diversity. *CATESOL Journal*, 24(1), 220-244.
- Mor, S., Morris, M. W., & Joh, J. (2013). Identifying and training adaptive cross-cultural management skills: The crucial role of cultural metacognition. *Academy of Management Learning & Education*, 12(3), 453-475.
- Moynihan, L. M., Peterson, R. S., & Earley, P. C. (2006). Cultural intelligence and the multinational team experience: Does the experience of working in a multinational team improve cultural intelligence? In *National Culture and Groups* (pp. 299-323). Emerald Group Publishing Limited.
- Nieto, S. (1996). *Affirming diversity: The sociopolitical context of multicultural education* (2<sup>nd</sup> ed.). White Plains, NY: Longman.
- Nieto, S. (2004). *Affirming diversity: The sociopolitical context of multicultural education* (4<sup>th</sup> ed.) New York, NY: Pearson.
- Oates, G. L. S. C. (2003). Teacher-student racial congruence, teacher perceptions, and test performance. *Social Science Quarterly*, 84(3), 508-525.

- Office for Civil Rights, United States. Department of Education. (2013). *Office for Civil Rights: Ensuring equal access to quality education*. Washington, D.C: The Office.
- Olneck, M. (2005). Economic consequences of the academic achievement gap for African Americans. *Marq. L. Rev.*, 89, 95.
- Padrón, Y. N., Waxman, H. C., & Rivera, H. H. (2002). Educating Hispanic Students: Effective Instructional Practices. *Center for Research on Education, Diversity & Excellence*.
- Pinderhughes, E. (1995). Empowering diverse populations: Family practice in the 21st century. *Families and Society*, 76, 131-140.
- Pohan, C. A. (1996). Preservice teachers' beliefs about diversity: Uncovering factors leading to multicultural responsiveness. *Equity and excellence in education*, 29(3), 62-69.
- Pope, J., & Wilder, J. (2005). Not That I'm Out in the Field: Student Teaching and Valuing Diversity. *Journal of Instructional Psychology*, 32(4), 322.
- Porter, R. E., & Samovar, L. A. (1991). Basic principles of intercultural communication. *Intercultural communication: A reader*, 6, 5-22.
- Raver, J.L. & Van Dyne, L. (2018). *Developing Cultural Intelligence*. In K.G. Brown (Ed.), *The Cambridge Handbook of Workplace Training and Employee Development* (407-440). Cambridge, UK: Cambridge University Press.
- Rist, C. (1970). Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education. *Challenging the myth: The schools, the Blacks, and the poor* (Reprint Series No. 5). Cambridge, MA: Harvard Educational Review.
- Rockstuhl, T., Ang, S., Ng, K. Y., Lievens, F., & Van Dyne, L. (2015). Putting judging situations into situational judgment tests: Evidence from intercultural multimedia SJTs. *Journal of Applied Psychology*, 100(2), 464.

- Rubie-Davies, C., Hattie, J., & Hamilton, R. (2006). Expecting the best for students: Teacher expectations and academic outcomes. *British Journal of Educational Psychology*, 76(3), 429-444.
- Rudd, T. (2014). Racial disproportionality in school discipline: Implicit bias is heavily implicated. Kirwan Institute for the Study of Race and Ethnicity.
- Samovar, L.A. & Porter, R.E. (2001). *Communication between cultures*. Belmont, CA: Wadsworth Publishing.
- Sharma, S. (2011). Examining the practice of critical reflection for developing pre-service teachers' multicultural competencies: Findings from a study abroad program in Honduras. *Issues in Teacher Education*. 20 (2), 9.
- Sheets, R. (1999). Relating competence in an urban classroom to ethnic identity development. In R. Sheets (Ed.), *Racial and ethnic identity in school practices: Aspects of human development*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Siwatu, K. O. (2005). Exploring the factors that influence preservice teachers' culturally responsive teaching self-efficacy and outcome expectancy beliefs.
- Siwatu, K. O. (2007). Preservice teachers' culturally responsive teaching self-efficacy and outcome beliefs. *Teaching and Teacher Education*, 23, 1086-1101.
- Siwatu, K. O. (2009) Designing self-efficacy building interventions in the preparation of culturally responsive teachers. In Milner H. R. (Ed.), *Diversity and education: Teachers, teaching, and teacher education* (pp. 119-131). Springfield, IL: Charles C. Thomas.
- Siwatu, K. O., Polydore C. L., Starker T. V. (2009). Prospective elementary school teachers' culturally responsive teaching self-efficacy beliefs. *Multicultural Learning and Teaching*, 4 (1), 1-15.



- Siwatu, K. O., Starker T. V. (2010) Predicting preservice teachers' self-efficacy to resolve a cultural conflict involving an African American student. *Multicultural Perspectives*, 12 (1), 10-17.
- Siwatu, K. O. (2011) Preservice teachers' sense of preparedness and self-efficacy to teach in America's urban and suburban schools: Does context matter? *Teaching and Teacher Education*, 27, 357-365.
- Skiba, R. J., Michael, R. S., Nardo, A. C., & Peterson, R. (2000). The Color of Discipline: Sources of Racial and Gender Disproportionality in School Punishment. Policy Research Report.
- Sleeter, C. (2008). An invitation to support diverse students through teacher education. *Journal of Teacher Education*, 59(3), 212-219.
- Smith, K., & Kendall, L. M. Hulin (1969). *The measurement of satisfaction in work and retirement: A strategy for the study of attitudes*.
- Sorhagen, N. S. (2013). Early teacher expectations disproportionately affect poor children's high school performance. *Journal of Educational Psychology*, 105(2), 465-477.
- Sternberg, R. J., & Detterman (Eds.) (1986). *What is intelligence?: Contemporary viewpoints on its nature and definition*. Norwood, NJ:Ablex.
- Sternberg, R. J. (2015) Successful intelligence: A model for testing intelligence beyond IQ tests. *European Journal of Education and Psychology*. 8 (2), 76-84.
- Tajfel, H., & Wilkes, L. 1963. Classification and quantitative judgement. *British Journal of Psychology*, 54, 101-114.

- Templer, K. J., Tay, C., & Chandrasekar, N. A. (2006). Motivational cultural intelligence, realistic job preview, realistic living conditions preview, and cross-cultural adjustment. *Group & Organization Management*, 31(1), 154-173.
- Tharp, R. G. (1989). *Psychocultural variables and constants: Effects on teaching and learning in schools* (Vol. 44, No. 2, p. 349). American Psychological Association.
- Turner, J. C. (1999). Some current issues in research on social identity and self-categorization theories. In N. Ellemers, R. Spears, & B. Dossje (Eds.), *Social identity: Context, commitment, content* (pp. 6–34). Oxford, UK: Blackwell.
- Umana-Taylor, A. J., Quintana, S. M., Lee, R. M., Cross, W. E., Rivas-Drake, D., Schwartz, S. J., Syed, M., Yip, T., Seaton, E., & Study Group on Ethnic and Racial Identity in the 21<sup>st</sup> Century (2014). Ethnic and Racial Identity During Adolescence and Into Young Adulthood: An Integrated Conceptualization. *Child Development*, 85, 21-39.
- Williams, T. R. (2005). Exploring the impact of study abroad on students' intercultural communication skills: Adaptability and sensitivity. *Journal of Studies in International Education*, 9 (4), 356-371.
- Wolf, G. H. (2007). Studying Abroad in Berlin and Achieving Cultural Competence using English. *Die Unterrichtspraxis/Teaching German*, 40(2), 143-146.
- Yedlin, J. (2004). Teacher talk: Enabling ELLs to 'grab on' and climb high'. *Perspectives*.
- Yosso, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race ethnicity and education*, 8(1), 69-91.
- Van Dyne, L., Ang, S., Ng, K. Y., Rockstuhl, T., Tan, M. L., & Koh, C. (2012). Sub-dimensions of the four-factor model of cultural intelligence: Expanding the conceptualization and

measurement of cultural intelligence. *Social and personality psychology compass*, 6(4), 295-313.

Velez, J. J., & Cano, J. (2008). The relationship between teacher immediacy and student motivation. *Journal of Agricultural Education*, 49(3), 76-86.

Villegas, A. M. (1991). *Culturally responsive pedagogy for the 1990's and beyond*. Washington, D.C.: ERIC Clearinghouse on Teacher Education.

Zong, J., Batalova, J. & Hallock, J. (2018, February 8). *Frequently Requested Statistics on Immigrants and Immigration in the United States*. Retrieved from <https://www.migrationpolicy.org>

Table 1

*Descriptive Statistics for all Measures*

	<b>N</b>	<b>Alpha</b>	<b>Mean</b>	<b><i>SD</i></b>
CRT Self Efficacy	130	.98	76.81	15.89
CQ Motivational	130	.86	5.41	0.96
CQ Cognitive	130	.91	4.60	1.13
CQ Metacognitive	130	.89	5.42	0.92
CQ Behavioral	130	.90	5.04	1.02
Job Satisfaction	130	.96	2.43	0.63
Relevant Experiences	130	.84	11.16	4.87
School Diversity (% non-White)	102	NA	52.84	32.87

Table 2  
*Bivariate Correlations Between Measures*

	N	CQ Mot	CQ Cog	CQ Meta	CQ Beh	Job Sat	Rel Exp	School Div.	Years Exp
CRT Self Efficacy	130	.53***	.29**	.55***	.31***	.43***	.16	.09	.27**
CQ Motivational	130		.55***	.59***	.51***	.36***	.41***	.29**	.19*
CQ Cognitive	130			.60***	.61***	.16	.39***	.28**	-.02
CQ Metacognitive	130				.59***	.35***	.25**	.14	-.02
CQ Behavioral	130					.18*	.26**	.17	.13
Job Satisfaction (JDI)	130						.13	-.13	.10
Relevant Experiences	130							.41***	.22*
School Diversity (% non-White)	102								.23*
Years of Teaching Experience	127								

*Note:* \*  $p < 0.05$ , \*\*  $p < 0.01$  (2-tailed)

Table 3  
*Relations of CQ Subscales to Culturally Responsive Teaching Self-Efficacy*

	<b>Beta</b>	<b>t (4)</b>	<b>p</b>	<b>VIF</b>
CQ Motivational	0.363	3.895	.000***	1.75
CQ Cognitive	-0.15	-1.48	0.143	1.96
CQ Metacognitive	0.454	4.543	.000***	2.02
CQ Behavioral	-0.05	-0.57	0.57	1.84

*Note:* \*\*\*  $p < 0.001$ ,  $N = 130$

Table 4  
*Relations of CQ Subscales to Relevant Experiences*

	<b>Beta</b>	<b>t (4)</b>	<b>p</b>	<b>VIF</b>
CQ Motivational	0.325	3.098	.002**	1.75
CQ Cognitive	0.271	2.441	.016*	1.96
CQ Metacognitive	-0.1	-0.89	0.375	2.02
CQ Behavioral	-0.01	-0.06	0.952	1.84

*Note:* \*  $p < 0.05$ , \*\*  $p < 0.01$  (2-tailed)  $N = 130$

Table 5

*Relations of CQ subscales to Job Satisfaction for Predominantly White Schools*

	<b>Beta</b>	<b>t (4)</b>	<b>p</b>	<b>VIF</b>
CQ Motivational	0.102	0.659	0.513	1.43
CQ Cognitive	-0.058	-0.336	0.738	1.79
CQ Metacognitive	0.44	2.58	.013*	1.75
CQ Behavioral	-0.246	-0.246	0.161	1.79

*Note:* \*  $p < 0.05$ ,  $N = 55$



Table 6

*Relations of CQ Subscales to Job Satisfaction in Predominantly Non-White schools*

	<b>Beta</b>	<b>t (4)</b>	<b>p</b>	<b>VIF</b>
CQ Motivational	0.637	3.395	.002**	2.32
CQ Cognitive	-0.314	-1.65	0.106	2.38
CQ Metacognitive	0.16	0.917	0.364	2.02
CQ Behavioral	0.068	0.395	0.695	1.97

*Note:* \*\*  $p < 0.01$ ,  $N = 47$

Table 7

*Comparisons by School Type*

	Predominantly Non-White		Predominantly White		t	p
	M	SD	M	SD		
CRTSE	75.65	16.84	77.23	16.28	-0.48	0.63
CQ Motivational	5.10	0.99	5.67	0.95	-2.95	0.004
CQ Cognitive	4.24	1.15	4.85	1.05	-0.28	0.007
CQ Metacognitive	5.25	0.97	5.51	0.89	-1.39	0.17
CQ Behavioral	4.86	1.00	5.13	1.08	-1.34	0.18
Relevant Experiences	9.73	4.85	12.68	4.35	-3.25	0.002
Job Satisfaction	2.49	0.64	2.34	0.67	1.1	0.27

*Note.* Predominantly White (n = 55), Predominantly Non-White (n = 47)

## APPENDIX A

### E-CQS (Expanded Cultural Intelligence Scale)

Instructions: Read each statement and select the response that best describes your capabilities relative to those of your peers. Select the answer that BEST describes you AS YOU REALLY ARE.

Response scale: 1=strongly disagree; 7=strongly agree

#### Motivational CQ

##### *Intrinsic Motivation*

I truly enjoy interacting with people from different cultures.

I thrive on the differences in cultures that are new to me

Given a choice, I prefer work groups composed of people with different (rather than similar) cultural backgrounds.

##### *Extrinsic Motivation*

I value the status I would gain from living or working in a different culture.

Given a choice, I value the tangible benefits (pay, promotion, perks) of an intercultural rather than a domestic role.

I value the reputation I would gain from developing global networks and connections.

##### *Self-Efficacy to Adjust*

I am confident that I can persist in coping with living conditions in different cultures.

I am sure I can deal with the stresses of interacting with people from cultures that are new to me.

I am confident I can socialize with locals in a culture that is unfamiliar to me.

#### Cognitive CQ

##### *Culture General Knowledge*

I can describe the different cultural value frameworks that explain behaviors around the world.  
 I can describe similarities and differences in legal, economic, and political systems across cultures.  
 I can describe differences in kinship systems and role expectations for men and women across cultures.  
 I can describe different views of beauty and aesthetics across cultural settings.  
 I can speak and understand many languages.

#### *Context-Specific Knowledge*

I can describe the ways that leadership styles differ across cultural settings.  
 I can describe how to put people from different cultures at ease.  
 I can describe effective negotiation strategies across different cultures.  
 I can describe different ways to motivate and reward people across cultures.  
 I can describe effective ways for dealing with conflict in different cultures.

### Metacognitive CQ

#### *Planning*

I develop action plans before interacting with people from a different culture.  
 I think about possible cultural differences before meeting people from other cultures.  
 I ask myself what I hope to accomplish before I meet with people from different cultures.

#### *Awareness*

I am aware of how my culture influences my interactions with people from different cultures.  
 I pay attention to how cultural aspects of the situation influence what is happening in that situation.  
 I am conscious of how other people's culture influences their thoughts, feelings, and actions.

#### *Checking*

I adjust my understanding of a culture while I interact with people from that culture.  
 I double check the accuracy of my cultural knowledge during intercultural interactions.  
 I update my cultural knowledge after a cultural misunderstanding.

### Behavioral CQ

#### *Verbal Behavior*

I change my use of pause and silence to suit different cultural situations.  
 I vary my verbal behaviors (accept, tone, rate of speaking) to fit specific cultural contexts.

I modify the amount of warmth I express to fit the cultural context.

*Non-Verbal Behavior*

I modify how close or far apart I stand when interacting with people from different cultures.

change my non-verbal behaviors (hand gestures, head movements) to fit the cultural situation.

I vary the way I greet others (shake hands, bow, nod) when in different cultural contexts.

*Speech Acts*

I modify the way I disagree with others to fit the cultural setting.

I change how I make requests of others depending on their cultural background.

I vary the way I show gratitude (express appreciation, accept compliments) based on the cultural context.

© Cultural Intelligence Center 2014. Used by permission of Cultural Intelligence Center.

Note. Use of this scale granted to academic researchers for research purposes only.

For information on using the scale for purposes other than academic research (e.g., consultants and non-academic organizations), please send an email to [info@culturalq.com](mailto:info@culturalq.com)

## APPENDIX B

### Culturally responsive teaching self-efficacy scale

Instructions: Please indicate how confident you are in your ability to engage in the following teaching practices from 0 (no confidence at all) to 100 (completely confident).

- (1) Adapt instruction to meet the needs of my students
- (2) Obtain information about my students' academic strengths
- (3) Determine whether my students like to work alone or in a group
- (4) Determine whether my students feel comfortable competing with other students
- (5) Identify ways that the school culture (e.g., values, norms, and practices) is different from my students' home culture
- (6) Implement strategies to minimize the effects of the mismatch between my students' home culture and the school culture
- (7) Assess student learning using various types of assessments
- (8) Obtain information about my students' home life
- (9) Build a sense of trust in my students
- (10) Establish positive home-school relations
- (11) Use a variety of teaching methods
- (12) Develop a community of learners when my class consists of students from diverse backgrounds
- (13) Use my students' cultural background to help make learning meaningful
- (14) Use my students' prior knowledge to help them make sense of new information

- (15) Identify ways how students communicate at home may differ from the school norms
- (16) Obtain information about my students' cultural background
- (17) Teach students about their cultures' contributions to science
- (18) Greet English Language Learners with a phrase in their native language
- (19) Design a classroom environment using displays that reflects a variety of cultures
- (20) Develop a personal relationship with my students
- (21) Obtain information about my students' academic weaknesses
- (22) Praise English Language Learners for their accomplishments using a phrase in their native language
- (23) Identify ways that standardized tests may be biased towards linguistically diverse students
- (24) Communicate with parents regarding their child's educational progress
- (25) Structure parent-teacher conferences so that the meeting is not intimidating for parents
- (26) Help students to develop positive relationships with their classmates
- (27) Revise instructional material to include a better representation of cultural groups
- (28) Critically examine the curriculum to determine whether it reinforces negative cultural stereotypes
- (29) Design a lesson that shows how other cultural groups have made use of mathematics
- (30) Model classroom tasks to enhance English Language Learners' understanding
- (31) Communicate with the parents of English Language Learners regarding their child's achievement
- (32) Help students feel like important members of the classroom
- (33) Identify ways that standardized tests may be biased towards culturally diverse students
- (34) Use a learning preference inventory to gather data about how my students like to learn
- (35) Use examples that are familiar to students from diverse cultural backgrounds
- (36) Explain new concepts using examples that are taken from my students' everyday lives

- (37) Obtain information regarding my students' academic interests
- (38) Use the interests of my students to make learning meaningful for them
- (39) Implement cooperative learning activities for those students who like to work in groups
- (40) Design instruction that matches my students' developmental needs



## APPENDIX C

### Relevant experience measure

Instructions: Please answer the following questions Yes or No.

1. Have you studied a foreign language in high school?
2. Have you studied a foreign language in college?
3. Have you studied a foreign language on your own time (outside of school)?
4. Have you studied abroad?
5. Have you traveled outside of the United States?
6. Have you attended a religious service in a religion other than your own?
7. Have you lived in a neighborhood where the majority of your neighbors were not of your racial group?
8. Have you lived in a neighborhood where the majority of your neighbors spoke a language other than English?
9. Have you attended a school where the majority of students were not of your racial group?
10. Have you attended a school where the majority of students spoke a language other than English?
11. Have you attended a church/temple/mosque where the majority of members were not of your racial group?
12. Have you attended a church/temple/mosque where the majority of members spoke a language other than English?
13. Have you attended a social or community event where the majority of attendees were not of your racial group?

14. Have you attended a social or community event where the majority of attendees spoke a language other than English?
15. Have you had a close friend from a different racial group?
16. Have you had a close friend whose native language was different from your own?
17. Have you had a mentor or mentored someone from a different racial group?
18. Have you had a mentor or mentored someone whose native language was different from your own?
19. Have you dated a person of a different racial group?
20. Have you dated a person whose native language was different from your own?
21. Have you had a roommate from a different racial group?
22. Have you had a roommate whose native language was different from your own?

## APPENDIX D

### Demographic Measure

What is your highest level of completed education?

- ☐ Associate degree
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Advanced degree (Ph.D., M.D.)

To which gender do you most identify?

- ☐ Female
- ☐ Male
- ☐ Transgender Female
- ☐ Transgender Male
- ☐ Gender Variant/Non-conforming
- ☐ Not Listed
- ☐ Prefer not to answer

Please type your age\_\_\_\_\_.

What is the name of the school in which you teach? Please provide the full name of the school (for example, Washington Elementary).

*We will use this information to access publicly available demographic information about participating teachers' schools. We will not contact anyone at your school or district and information about participating teachers' schools will not be published.*

What is the zip code of the school where you teach?

What is your race? Please select all the apply.

- American Indian or Alaska Native. A person having origins in any of the original peoples of North and South American (including Central America), and who maintain tribal affiliation or community attachment.
- Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- Black or African American. A person having origins in any of the black racial groups of Africa. Terms such as “Haitian” or “Negro” can be used in addition to “Black or African American.”
- Native Hawaiian or another Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.
- Other (Please specify) \_\_\_\_\_.

Are you of Hispanic, Latino or Spanish origin?

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican American or Chicano
- Yes, Cuban

- Yes, another Hispanic, Latino, or Spanish origin (for example, Argentinian, Colombian, Dominican, Nicaraguan, Salvadorian, Spaniard, and so on).

Are you or your parent (s) an immigrant to the United States? Which generation are you?

- No
- Yes, I immigrated to the United States (first generation)
- Yes, my parent (s) immigrated to the United States (second generation)
- No, but my grandparents immigrated to the United States (third generation)

How many years of teaching experience do you have? This number should not include your pre-service or student teaching. \_\_\_\_\_.

## APPENDIX E

## Job Descriptive Index

## Job in General

Think of your job in general. All in all, what is it like most of the time? In the blank beside each word or phrase below, write

Y for "Yes" if it describes your job  
N for "No" if it does not describe it  
? for "?" if you cannot decide

.....

- ☐ Pleasant
- ☐ Bad
- ☐ Great
- ☐ Waste of time
- ☐ Good
- ☐ Undesirable
- ☐ Worthwhile
- ☐ Worse than most
- ☐ Acceptable
- ☐ Superior
- ☐ Better than most
- ☐ Disagreeable
- ☐ Makes me content
- ☐ Inadequate
- ☐ Excellent
- ☐ Rotten
- ☐ Enjoyable
- ☐ Poor

## Work on Present Job

Think of the work you do at present. How well does each of the following words or phrases describe your work? In the blank beside each word or phrase below, write

Y for "Yes" if it describes your work  
N for "No" if it does not describe it  
? for "?" if you cannot decide

.....

- ☐ Fascinating
- ☐ Routine
- ☐ Satisfying
- ☐ Boring
- ☐ Good
- ☐ Gives sense of accomplishment
- ☐ Respected
- ☐ Exciting
- ☐ Rewarding
- ☐ Useful
- ☐ Challenging
- ☐ Simple
- ☐ Repetitive
- ☐ Creative
- ☐ Dull
- ☐ Uninteresting
- ☐ Can see results
- ☐ Uses my abilities